SCREENING SITE INSPECTION REPORT
FOR
HALLIE TOWN LANDFILL
CHIPPEWA FALLS, WISCONSIN
U.S. EPA ID: WID981095920
SS ID: NONE
TDD: F05-8905-015
PAN: FWI0149SA

APRIL 25, 1990

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International Specialists in the Environment

SIGNATURE PAGE
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1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Hallie Town Landfill (HTL) site under contract number 68-01-7347.

The site was initially discovered by the Wisconsin Department of Natural Resources (WDNR) on August 24, 1984, when a former employee of Control Data informed WDNR that approximately 100 gallons of volatile organic waste had been disposed of in the landfill sometime prior to 1972 by Control Data (WDNR 1984). The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Vanessa Eigenbrodt of WDNR. The PA is dated September 23, 1985.

FIT prepared an SSI work plan for the HTL site under technical directive document (TDD) F05-8706-067, issued on June 5, 1987. The SSI work plan was approved by U.S. EPA on May 11, 1989. The SSI of the HTL site was conducted on May 23, 1989, under TDD F05-8905-015, issued on May 11, 1989.

The FIT SSI included an interview with site representatives, a reconnaissance inspection of the site, and the collection of seven soil samples and five residential well samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined

> preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section includes information obtained from SSI work plan preparation and the site representative interview.

2.2 SITE DESCRIPTION

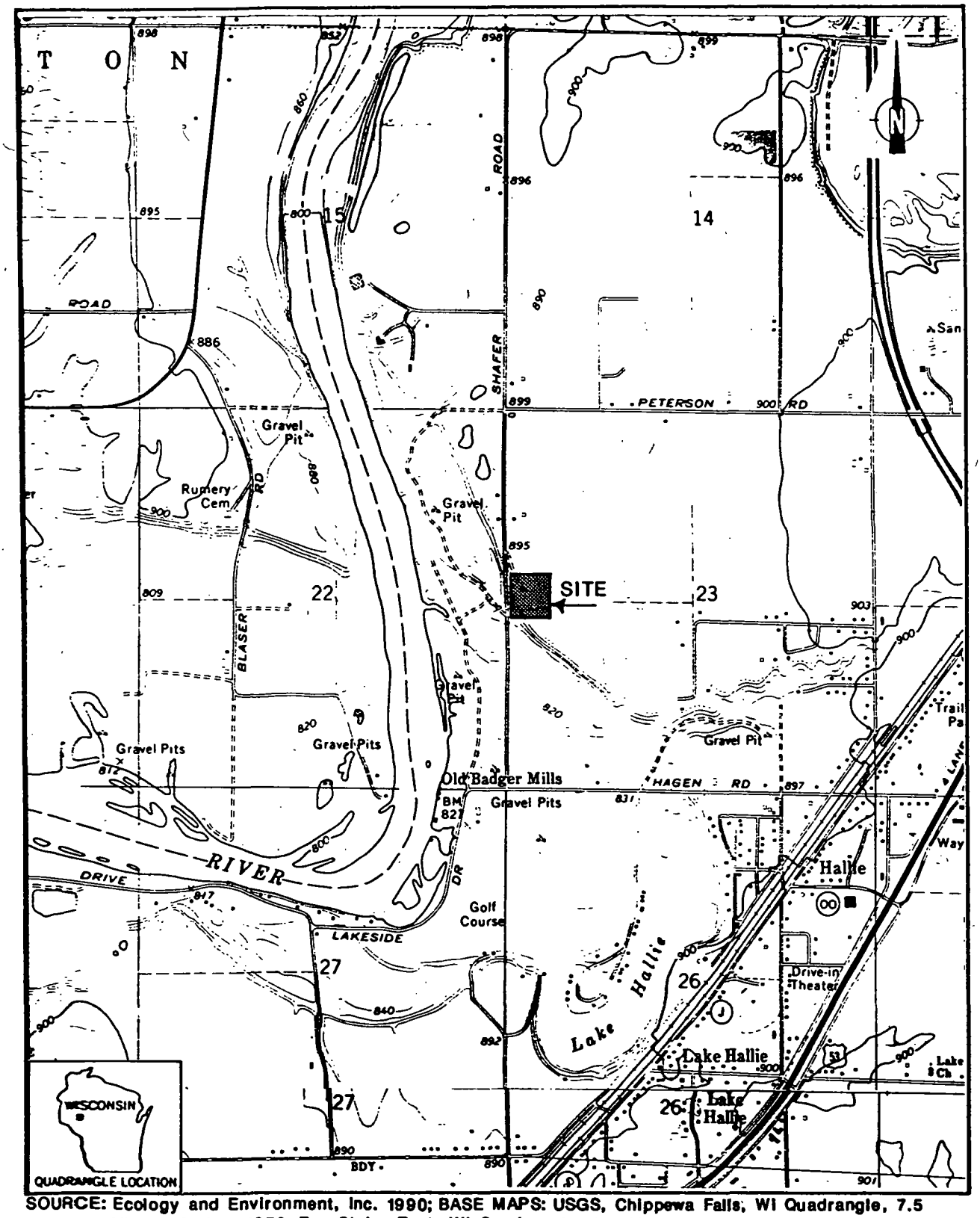
The HTL site is an inactive sanitary landfill located on a 6.6-acre parcel of land on Shaffer Road in western Hallie Township, approximately 1/4 mile east of the Chippewa River, in Chippewa County, Wisconsin (SW1/4NW1/4 sec. 23, T.28N., R.9W.) (see Figure 2-1 for site location). A 4-mile radius map of the HTL site is provided in Appendix A.

2.3 SITE HISTORY

The HTL site is currently owned by Hallie Township and has been owned by the township since at least 1953 (Meier 1989). The site was used as a sanitary landfill by the township from approximately 1953 until the fall of 1978. Approximately 4 of the 6.6 acres were landfilled during this period of time (Meier 1989).

The landfill was officially closed in 1981. The township is not currently using the property for any operations. Ownership and operation of the property prior to 1953 are not known (Meier 1989).

During the years of the landfill's operation, 5 of the 6.6 acres were licensed as a landfill under WDNR license number 1772 (WDNR 1972a). The site was licensed from October 1971 to the fall of 1978 (WDNR 1972a, 1980). The license for the HTL site allowed the deposition of waste from Hallie Township only, which could have possibly included waste from



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Chippewa Falls, WI Quadrangle, 7.5 Minute Series, 1972; Eau Claire East, WI Quadrangle, 7.5 Minute Series, 1972.

SCALE

0 ½ 1 MILE

FIGURE 2-1 SITE LOCATION

small industries in the area. The license further stipulated that the wastes which were allowed would include demolition wastes, municipal garbage, trash, and brush. Pesticides, acids, caustics, flammables, explosives, pathological or similar wastes, and hazardous wastes were not to be deposited. Open burning on-site was allowed only with prior permission from WDNR (WDNR 1972b). The landfill was open to the public on Wednesday and Saturday, and the waste was to be compacted and covered each day that the landfill was open (WDNR 1972a, 1972b). The township's last application for renewal of the license was in April 1978 (WDNR 1978).

Due to current practices at the time of landfilling operations at the HTL site, used tires may have also been allowed to be deposited.

Five WDNR-licensed collection and transportation agencies were listed as transporters on the landfill license application submitted by Hallie Township for the HTL site. The agencies included American Disposal, Dresels [sic] Garbage Service, Mewhorter Disposal, Mikes [sic] Garbage Service, and Sanitary Disposal, Inc. (WDNR 1978). The quantity of waste deposited by each transporter and the total quantity of waste deposited during the period of landfilling is not known (Meier 1989).

In 1971, at the beginning of the period of the HTL site's operation as a licensed landfill, the WDNR performed three compliance inspections at the HTL site. The inspections occurred on May 28, August 24, and November 30 of that year. As a result of the first of these inspections, WDNR requested that a number of operational improvements be made at the site, improvements which were to be satisfactorily completed within 60 days. The improvements included the posting of the license number at the site, the control of rodents and insects at the site, discontinuation of the practice of open burning at the site, and instituting the practice of compacting and covering the refuse. All of the above improvements were satisfactorily completed within 60 days (WDNR 1972b). The only subsequent action taken by WDNR during the period of the HTL site's operation was the issuance of a recommendation that an unknown number of tires that had been deposited on-site be covered. The date of this recommendation is not known (Meier 1989).

On May 15, 1980, nearly two years after Hallie Township ceased disposal of waste at the HTL site, an inspection of the site was made by

WDNR. The inspection determined that the landfill had not been covered with topsoil and seeded. The landfill could not be officially closed until these operations were completed. WDNR sent a letter to the township chairman on May 16, 1980, stating that the site was required to be completely covered and seeded by September 15, 1980. A follow-up inspection on September 24, 1980, determined that the actions had not been completed as requested (WDNR 1981a).

A letter dated September 29, 1980, was sent to Hallie Township stating that WDNR was recommending that a department order be issued to the township. The order would request that all areas of the landfill be properly graded and sloped and that all areas be covered with 2 feet of soil, followed by 6 inches of topsoil, all actions to be completed by May 31, 1981. Additionally, all filled areas were to be seeded with some type of vegetation by June 15, 1981, and the site was to be fenced to limit access to the site (WDNR 1980, 1981b).

On April 3, 1981, WDNR sent a proposed special order relating to the operations of the site. The order was based upon the finding that the site did not meet minimum WDNR solid waste standards. WDNR stated that it intended to issue the order requiring that the previously stipulated closing actions be taken (WDNR 1981b).

On June 2, 1981, WDNR inspected the site and found it to be properly closed and abandoned, as the area had been covered, graded, and seeded, and the site was fenced. Following this inspection, WDNR recommended that the special order not be issued, because all requirements of the proposed order had been satisfied (State of Wisconsin 1981).

In August 1984, a former employee of Control Data informed WDNR that Control Data had allegedly deposited at least 100 gallons of volatile organic chemicals (VOCs), including 1,1,1-trichloroethane and trichloroethylene, at the HTL site. It is possible that this material was dumped with municipal waste in the landfill for as long as the period of 1962 to 1972. WDNR recommended that private wells near the site be sampled for VOCs, and that monitoring wells be installed at the site (WDNR 1984). The analysis of private residential well samples collected in the vicinity of the site by WDNR did not detect any VOCs. As of the time of the SSI, no monitoring wells had been installed. A groundwater problem does exist southwest of the site, but this is

believed to be caused by a private industry in Eau Claire, Wisconsin (Meier 1989; Johnson 1989).

The HTL site is a known location for gatherings of local teenagers. A fire broke out on-site in 1987 as the result of one of these gatherings. The fire, however, did not result in any damage to the site (McEathron 1989). Because the fence installed in 1981 no longer surrounds the site completely, such unauthorized access is readily achieved.

According to federal, state, and local records, no additional enforcement actions have been initiated against the township concerning its operation of the HTL site.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the HTL site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the HTL site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Ted Nehrkorn, FIT team leader, and Regina Bayer, FIT team member, conducted an interview with Hallie Township officials on May 23, 1989. The officials present at the interview were David Meier, Hallie Township Chairman; Dennis Johnson, of Owen Ayres and Associates, Inc., the township's Environmental Consultant; and Dick McEathron, Hallie Township Road Superintendent. The interview took place at Hallie Township Town Hall. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

Following the site representative interview, FIT conducted a reconnaissance inspection of the HTL site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines.

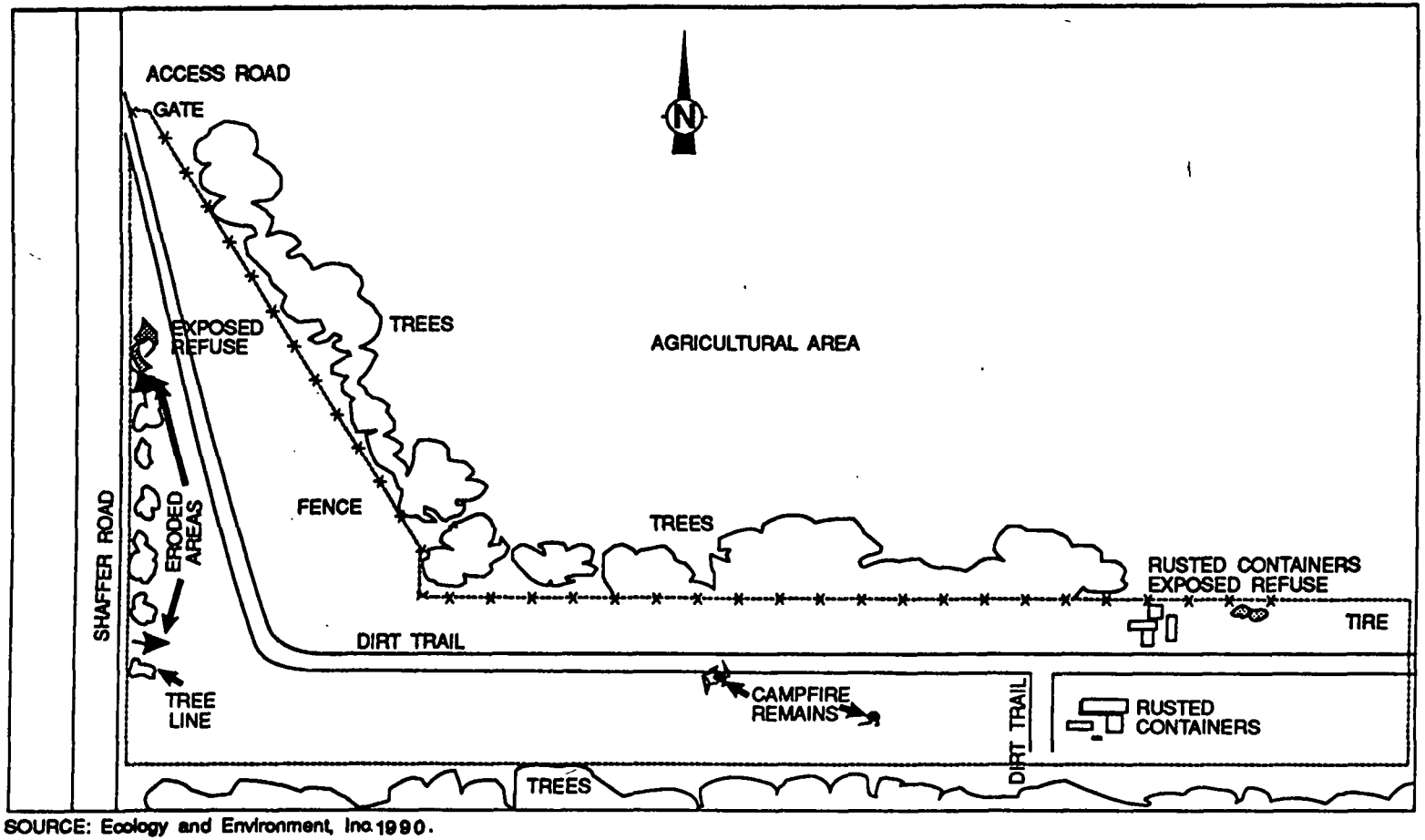
The reconnaissance inspection began on May 23, 1989, at 11:10 a.m. Johnson and McEathron accompanied FIT during the reconnaissance inspection. The reconnaissance inspection included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection.

Reconnaissance Inspection Observations. The HTL site is located in a rural area on the western edge of Hallie Township. This area is composed of agricultural land and many small residential subdivisions that are scattered throughout the area (see Figure 3-1 for site features). The general terrain of the area slopes to the west-southwest toward the Chippewa River, approximately 1/4 mile west of the site (United States Geological Survey [USGS] 1972).

The site is roughly L-shaped, with one axis oriented north-northwest, and the other, longer, axis oriented east-west. The site is bounded on the west by Shaffer Road and by wooded areas along the southern boundary and the northern and northeastern boundaries. A tree line parallels Shaffer Road along the western boundary. Agricultural areas border the site on the north and east.

Fencing 3 feet high exists along the northern and northeastern boundaries, with barbed wire fencing extending across the entrance for a distance of approximately 12 feet along the site's western boundary on Shaffer Road. An old fence line was observed along the entire southern border of the site and along the southeast corner of the site. There was no indication of any fence line along the unfenced portion of the western border.

The site is covered with grass and is relatively flat. The site slopes along the western and southern borders. The slope increases from north to south along the western border, with the steepest slopes being approximately 40% to nearly a sheer drop-off at the southwest corner of the site. The slope also increases from east to west along the southern border, with the steepest slope being approximately 30%. The steepest slopes on-site were observed on the south end of the west border. A



SOURCE: Ecology and Environment, Inc. 1990.

SCALE

0 125 250 375 500 FEET

FIGURE 3-1 SITE FEATURES

number of eroded areas were observed along the western border, indicating a potential overland flow pathway leading off-site. Exposed refuse was observed near one of the eroded areas.

An unpaved access road enters the site at the northwest corner, from Shaffer Road, and runs through the center of the landfill, running south-southwest. The road then dwindles to an unpaved trail that runs east to the eastern boundary of the site. Another dirt trail joins this trail, leading from the wooded area off-site along the southern border. Exposed refuse was observed near the area where the second trail enters the site. The trails, especially along the southern border of the site, are used as walking paths by local residents. A woman was observed along one of the trails during the SSI.

The remains of two apparently recent campfires were observed near the trail in the south-central portion of the site. Empty beer bottles were also observed in this area, indicating that this area may be used frequently for unauthorized gatherings. Township officials are aware of this use of the site (McEathron 1989).

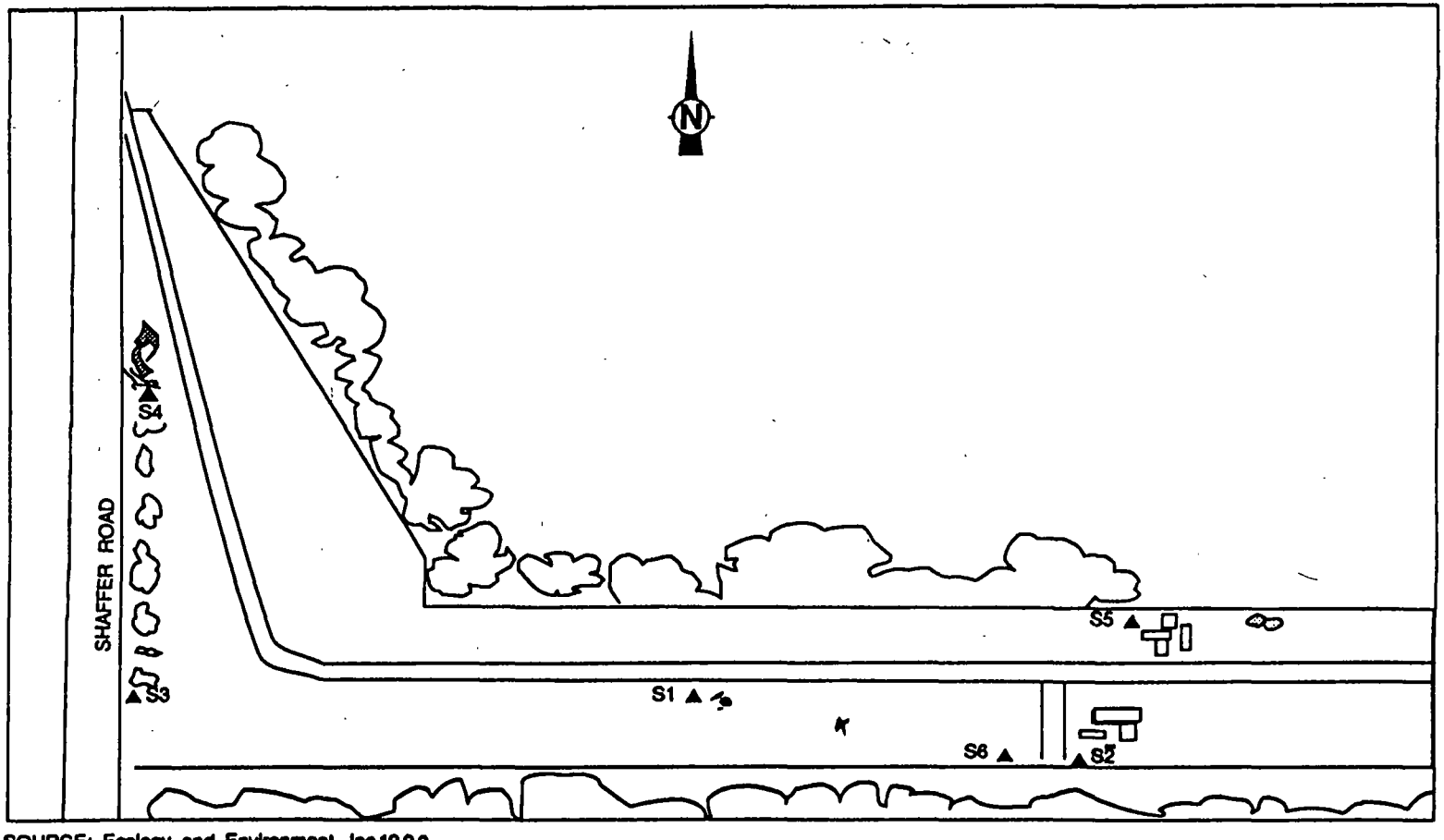
Exposed rusted containers were observed at the eastern end of the site, along the southern and northern border lines. An exposed rubber tire and some small bales of barbed wire were also observed along the northern border in this region.

3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine levels of U.S. EPA Target Compound List (TCL) compounds and U.S. EPA Target Analyte List (TAL) analytes present at the site. The TCL and TAL, with corresponding quantitation/detection limits, are provided in Appendix D.

On May 23, 1989, FIT collected six soil samples and one potential background soil sample. Portions of the samples were offered to site representatives, but the offer was declined. On May 24, 1989, FIT collected samples from five residential wells.

Soil Sampling Procedures. Soil sample S1 was collected from an area near the remains of a campfire in the south-central portion of the site near the trail (see Figure 3-2 for on-site soil sampling locations). Soil sample S2 was collected from an area near some exposed



SOURCE: Ecology and Environment, Inc.1990.

SCALE

0 125 250 375 500 FEET

FIGURE 3-2 ON-SITE SOIL SAMPLING LOCATIONS

refuse approximately 10 feet east of where the dirt trail enters the site from the off-site wooded area bordering the site on the south. Soil sample S3 was collected from an eroded area on the western boundary, in the southwest corner of the site.

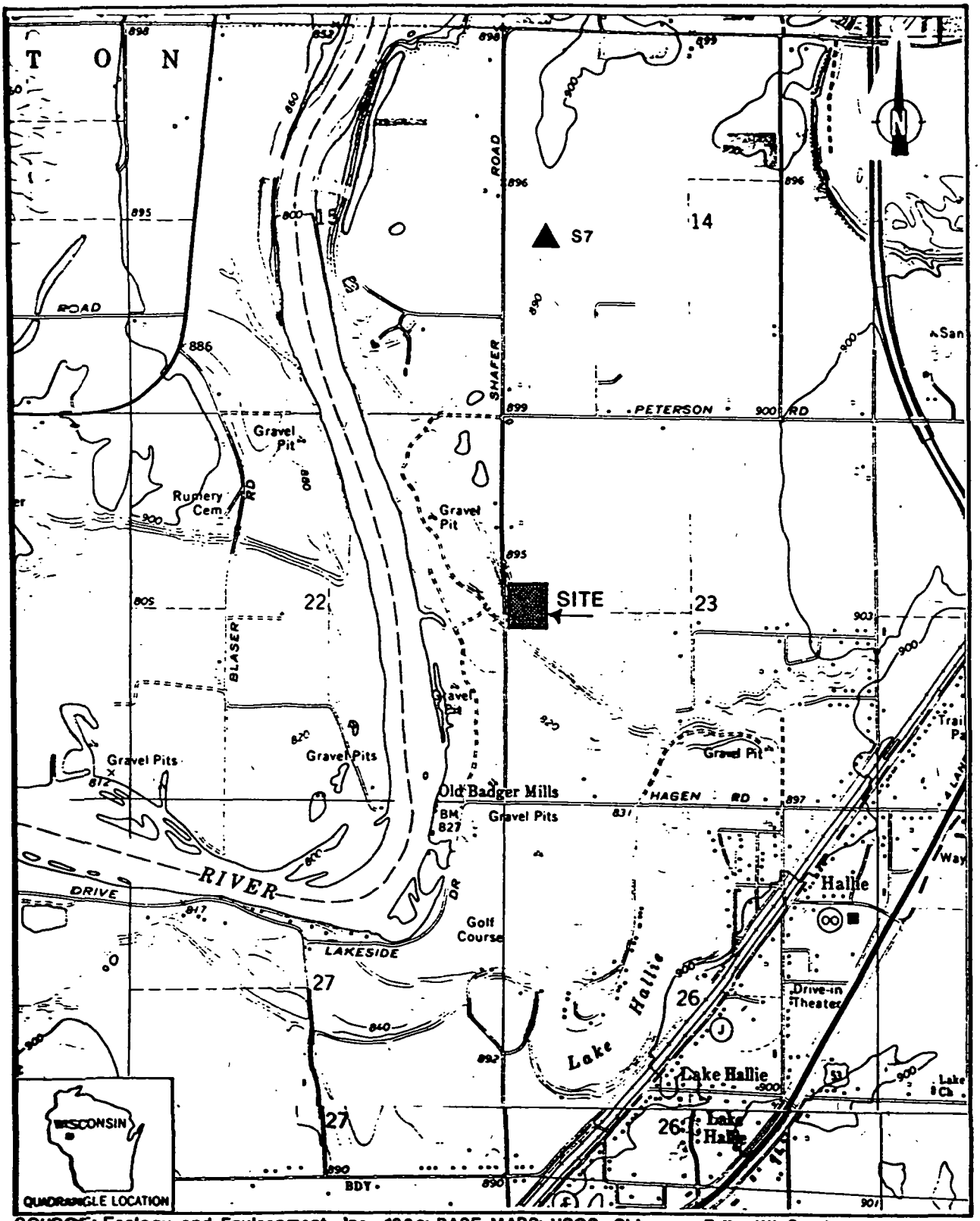
Soil sample S4 was collected from an eroded area on the western boundary of the site near some exposed refuse. Soil sample S5 was collected from a location near the eastern end of the site, along the northern fence line. Soil sample S6 was collected from a location near the eastern end of the site, along the southern border approximately 10 feet west of the area where the trail from the wooded area off-site enters the site. Soil sample S7, a potential background sample, was collected from a wooded area approximately 1 mile north of the site (see Figure 3-3 for off-site soil sampling location).

All soil samples with the exception of sample S5 were grab samples collected at the ground surface. The samples were collected at a depth of approximately 6 inches using a hand trowel and placed in sample bottles. Soil sample S5 was a grab sample collected from a depth of approximately 4 feet, using a hand auger to attain the desired depth. After the completion of the boring, a sample was obtained using the bucket auger and was transferred to sample bottles using a hand trowel.

Soil sampling locations S1 through S6 were chosen to determine whether TCL compounds or TAL analytes were present at the site. Soil sampling location S7 was chosen because it appeared to be a relatively undisturbed area. The sample was collected to determine the representative chemical content of the soil in the area surrounding the site (E & E 1987).

Standard E & E decontamination procedures were adhered to during the collection of all soil samples. The procedures included the scrubbing of all equipment (e.g., trowels and the bucket auger) with a solution of Alconox detergent and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987). All soil samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil samples were analyzed for TCL compounds under the U.S. EPA Contract Laboratory Program (CLP) by



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Chippewa Falls, WI Quadrangle, 7.5 Minute Series, 1972; Eau Claire East, WI Quadrangle, 7.5 Minute Series, 1972.

SCALE

0 ½ 1 MILE

FIGURE 3-3 OFF-SITE SOIL SAMPLING LOCATION

Environmental Monitoring and Services of Camarillo, California, and for TAL analytes by Allied Analytical Research, of Carrollton, Texas.

Residential Well Sampling Procedures. Residential well samples (indicated as RW1, RW2, RW3, RW4, and RW5) were collected to determine whether TCL compounds or TAL analytes had migrated from the site to groundwater in the vicinity of the site.

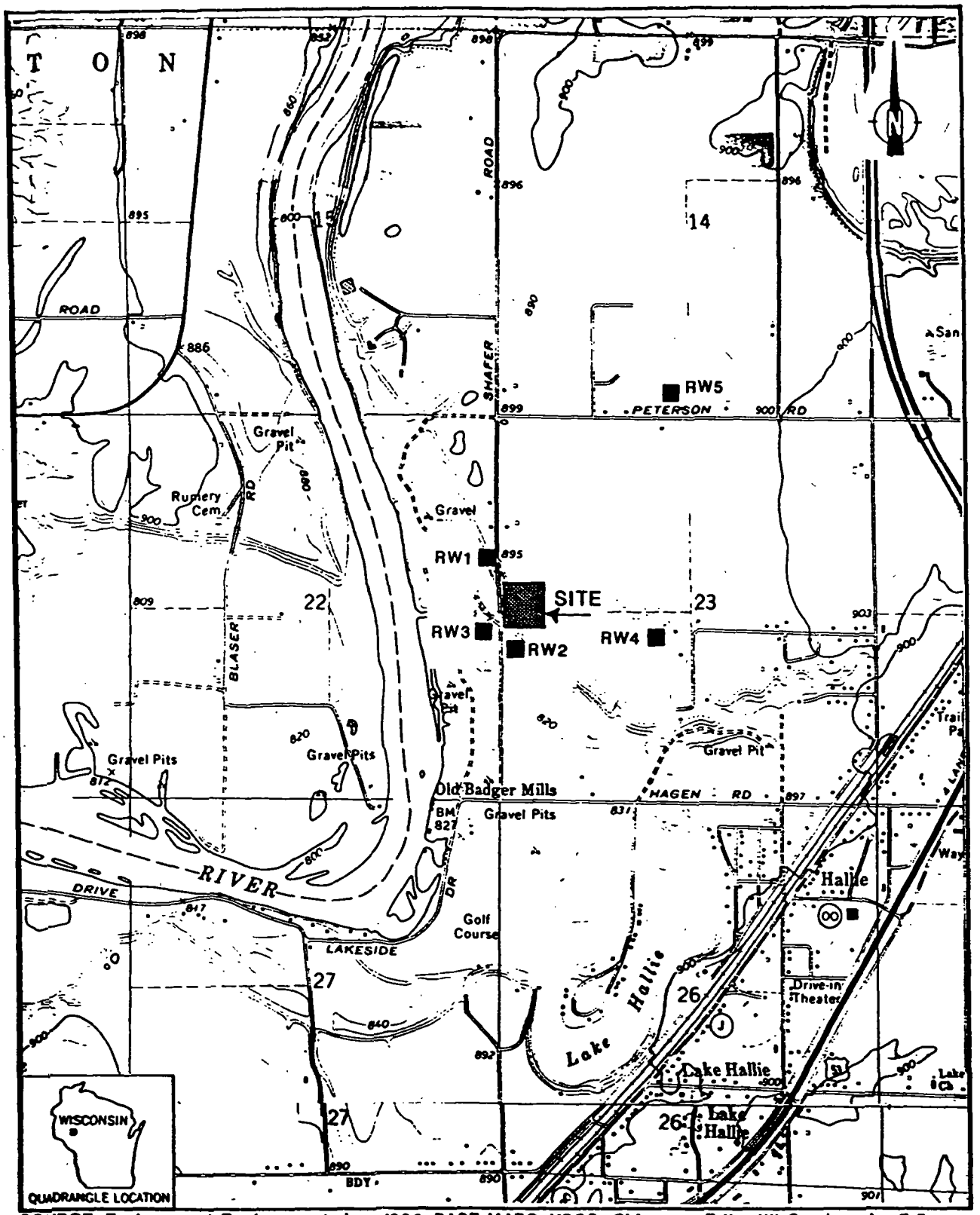
The residential well sampling locations were chosen because of their proximity to the site (see Figure 3-4 for residential well sampling locations).

Sample RW1 was collected from a residence approximately Non-responsive northwest of the site. Sample RW2 was collected from a residence approximately Non-responsive of the site. Sample RW3 was collected from a residence approximately Non-responsive of the site. Sample RW4 was collected from a residence approximately Non-responsive of the site. Sample RW5 was collected from a residence approximately Non-responsive Non-responsive northeast of the site. A duplicate residential well sample was collected and a field blank was prepared in accordance with U.S. EPA quality assurance/quality control requirements. The duplicate sample was collected at location RW1 (see Table 3-1 for addresses of residential well sampling locations).

All residential well samples were obtained from outlets that bypassed water treatment systems and storage tanks, with the exception of sample RW4, which passed through an iron filter. The water was allowed to discharge from the outlets for 15 minutes before samples were collected to insure that the sample sources had been purged of standing water (E & E 1987).

All residential well samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all residential well samples were analyzed for TCL compounds under the U.S. EPA CLP by Hazleton Laboratories, Inc., of Madison, Wisconsin, and for TAL analytes by JTC Environmental Consultants of Rockville, Maryland.



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Chippewa Falls, WI Quadrangle, 7.5 Minute Series, 1972; Eau Claire East, WI Quadrangle, 7.5 Minute Series, 1972.

SCALE
0 ½ 1 MILE

FIGURE 3-4 RESIDENTIAL WELL SAMPLING LOCATIONS

Table 3-1

ADDRESSES OF RESIDENTIAL WELL SAMPLING LOCATIONS

Sample	Well Depth*	Address
RW1 (Duplicate)	95 feet	Non-responsive
RW2	44 feet	
RW3	20 feet	
RW4	110 feet	
RW5	85 feet	

* Well depths provided by owner.

Source: Ecology/and Environment, Inc. 1990.

4. ANALYTICAL RESULTS

4.1 INTRODUCTION

This section includes results of chemical analysis of FIT-collected soil samples and residential well samples for TCL compounds and TAL analytes.

4.2 RESULTS OF CHEMICAL ANALYSIS OF FIT-COLLECTED SAMPLES

Soil Samples. Chemical analysis of FIT-collected soil samples revealed substances from the following groups of TCL compounds and TAL analytes: common laboratory artifacts (toluene and bis[2-ethylhexyl]-phthalate), common soil constituents, heavy metals, and metals (see Table 4-1 for complete soil sample chemical analysis results).

Residential Well Samples. Chemical analysis of FIT-collected residential well samples revealed substances from the following groups of TCL compounds and TAL analytes: aromatics, halogenated hydrocarbons, metals, heavy metals, common soil constituents, and the common laboratory artifact toluene (see Table 4-2 for complete residential well sample chemical analysis results).

The CLP quantitation/detection limits are provided in Appendix D.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL SAMPLES

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6	S7
Date	5/23/89	5/23/89	5/23/89	5/23/89	5/23/89	5/23/89	5/23/89
Time	1245	1255	1310	1320	1350	1405	1215
CLP Organic Traffic Report Number	EFK21	EFK22	EFK23	EFK24	EFK25	EFK26	EFK27
CLP Inorganic Traffic Report Number	MEEB65	MEEB66	MEEB67	MEEB68	MEEB69	MEEB70	MEEB71
Compound Detected (values in µg/kg)							
Volatile Organics							
toluene	—	—	—	6J	—	1J	—
Semivolatile Organics							
bis(2-ethylhexyl)phthalate	—	—	—	140J	—	—	—
Analyte Detected (values in mg/kg)							
aluminum	5,910	5,490	4,340	5,640	3,660	6,500	5,550
antimony	—	5.5JB	—	3.6JB	3.4JB	6.2JB	5.0JB
arsenic	1.3JNWB	—	0.98JNWB	—	—	1.8JNB	1.5JNB
barium	63.7	38.8B	23.6B	68.9	16.7B	93.6	85.6
cadmium	—	—	—	0.34JB	—	0.46JB	—
calcium	1,060	1,650	2,480	2,050	1,250	1,790	1,720
chromium	9.9	13	8.8	10.3	7.1	14.4	7.6
cobalt	5.1B	5.8B	6.6B	5.5B	4.5B	9.6B	3.8B
copper	5.0	15.4	16.1	18	9.0	23.4	5.8
iron	8,730	9,900	9,560	9,800	5,880	12,500	6,140
lead	5.3	34	5.8	32	1.3	138	11.5
magnesium	1,500	2,220	2,520	2,190	2,050	2,190	1,450
manganese	333JN	184JN	174JN	318JN	135JN	699JN	368JN
nickel	11.1	12.1	12.4	14.3	12.2	17.2	8.9
potassium	397B	340B	298B	325B	159B	386B	376B

Table 4-1 (Cont)

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4	S5	S6	S7
sodium	—	—	102B	—	—	91B	—
vanadium	25.9	24	25.7	89.8	14.8	28.4	14.6
zinc	23.6	47.5	25	77.5	15.6	295	29

— Not detected.

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1990.

Table 4-2

RESULTS OF CHEMICAL ANALYSIS OF

FIT-COLLECTED RESIDENTIAL WELL SAMPLES

Sample Collection Information and Parameters	Sample Number RW1	Duplicate	RW2	RW3	RW4	RW5	Blank
Date	5/24/89	5/24/89	5/24/89	5/24/89	5/24/89	5/24/89	5/24/89
Time	1010	1010	1045	1000	1120	1120	1015
CLP Organic Traffic Report Number	EFK28	EFK29	EFK30	EFK31	EFK32	EFK33	EFK34
CLP Inorganic Traffic Report Number	MEFB73	MEFB75	MEFB74	MEFB76	MEFB77	MEFB78	MEFB72
Temperature (°C)	16	16	17	18	16	18	—
Specific Conductivity (ppm)	60	60	50	140	45	50	—
pH	7.16	7.16	8.18	6.85	8.36	7.58	—
Compound Detected (values in µg/L)							
Volatile Organics							
1,2-dichloroethene (total)	—	—	—	—	0.9	—	—
tetrachloroethene	—	—	—	—	0.8	—	—
toluene	0.6	—	0.3	—	0.3	—	—
ethylbenzene	5	—	—	—	—	—	—
xylenes (total)	19	—	—	—	—	—	—
Analyte Detected (values in µg/L)							
aluminum	—	143	—	—	—	71.5B	91.5B
antimony	—	5.7	5.4	5.1N	9.4N	—	—
barium	—	—	20.4B	35.7B	19.4B	21B	—
beryllium	—	—	2.7JB	—	3.1JB	—	2.5JB
calcium	13,400	12,500	13,800	38,300	15,900	13,600	—
cobalt	—	—	—	7.6J*B	—	—	—
copper	35.8J	34.1J	—	—	—	12.4J	—
iron	97.5JB	91.5JB	499J	429J	636J	65.6JB	—
lead	1.2JB	5.7J+	0.87JB	0.97JB	0.53JB	1.0JB	0.84JB
magnesium	6,410J	6,160J	8,000J	16,400J	5,580J	6,230J	—
manganese	11.3J	8.1JB	809J	—	650J	—	—

Table 4-2 (Cont.)

Sample Collection Information and Parameters	Sample Number RW1	Duplicate	RW2	RW3	RW4	RW5	Blank
potassium	850B	—	960B	1,150B	1,070B	886B	—
selenium	—	3.8*	—	2.2*	—	—	—
silver	—	—	3.3J*NB	4.4J*NB	—	—	—
sodium	2,970	2,820	2,640	7,360	2,320	3,770	—
zinc	262J	235J	20.5J	—	—	19.2JB	—

— Not detected.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be quantitative or semi-quantitative.
+	Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative.	Data value may be biased.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1990.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and/or TAL analytes that are possibly attributable to the HTL site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

Much of the surface topography of southwest Chippewa County consists of rolling prairies produced from unconsolidated glacial drift sediments. The region is characterized by ground moraine, deposited by Wisconsinan-age glaciers, with pitted outwash found in the river valleys. The unconsolidated material is primarily sand and gravel. The bedrock consists of Precambrian crystalline granite, partially overlain by a layer (0 to 200 feet) of sedimentary Cambrian Mt. Simon sandstone (Wisconsin Conservation Department [WCD] 1963).

A review of well logs from the area surrounding the HTL site indicates that the glacially deposited sand and gravel varies in thickness from 40 feet to approximately 110 feet. The well logs also show an absence of confining material between the glacial drift deposits and the Mt. Simon sandstone, indicating that both units are hydraulically connected and constitute a single aquifer, the aquifer of concern (AOC). Because area wells are finished at shallow depths, the well logs do not indicate the depth of the sandstone in this area (Appendix E). The

sandstone may not be present in all areas, as the site is in the Chippewa River Valley, where it is observed that the Precambrian crystalline bedrock directly underlies the drift (WCD 1963).

The majority of the private residential wells within a 3-mile radius of the site draw from the glacial drift material, with the remaining wells drawing from the Mt. Simon sandstone. Most wells are screened at depths of 20 to 110 feet (see Appendix E). The cities of Chippewa Falls, located northeast of the site, and Eau Claire, located southwest of the site, operate municipal wells that draw from the glacial drift. Two of the seven municipal wells operated by Chippewa Falls are located within the 3-mile radius of the site (USGS 1972). Chippewa Falls blends the water obtained from the municipal wells prior to distribution to residents (Allen 1988). The 14 municipal wells operated by the city of Eau Claire are all located outside of the 3-mile radius (USGS 1972). The nearest well to the site is a private residential well located approximately 50 feet south of the site. This well is approximately 44 feet deep and draws from the glacial drift formation (Harling 1989). The general flow of groundwater appears to follow the local topography and flows to the west-southwest toward the Chippewa River (WCD 1963; USGS 1972).

TCL compounds and TAL analytes were detected in groundwater samples collected within a 1/2-mile radius of the site (see Table 4-2). The TAL analytes manganese and zinc were the only substances detected at elevated concentrations, but do not appear to be attributable to the site. Manganese appears to be a common soil constituent in the area, as it was detected in on-site samples in concentrations similar to that of the background soil sample S7 (see Table 4-1). Zinc was detected at an elevated concentration in one residential well sample, RW1, and was also detected at an elevated concentration in one on-site soil sample, S6. However, the source of the zinc detected in the residential well sample appears to be something other than the HTL site for the following reasons.

- Assuming a general groundwater flow to the west-southwest, sample RW1 would not be downgradient from the site.

- Zinc was detected in the downgradient samples RW2 and RW3 at concentrations similar to, or less than, the concentration detected in the upgradient sample RW5 (see Table 4-1).

The zinc detected in residential well sample RW1 (262J µg/L) (see Table 4-2 for definition of J qualifier) is not considered a health risk to persons using water from this well, because the concentration is well below the maximum contaminant level of 5,000 µg/L listed in the Safe Drinking Water Act (SDWA) (SDWA 1974).

The TAL analytes lead and zinc were detected in elevated concentrations in on-site soil sample S6. All other TCL compounds and TAL analytes detected in on-site soil samples were found to be present at concentrations similar to those of the background soil sample (S7) (see Table 4-1 for complete soil sample analysis results).

There does exist a potential for TCL compounds or TAL analytes to migrate from the site to groundwater in the vicinity. This potential is based on the following site information.

- TCL compounds and TAL analytes were detected in on-site soil samples.
- The unsaturated material found at the site is composed of sands and gravels, allowing for natural percolation to occur.
- The site was not properly closed until approximately 2 years after on-site disposal was discontinued.
- Private residential wells are as close as 50 feet from the site.

The potential for such migration to occur, however, appears to be low for the following reasons.

- Lead and zinc are the only TCL compounds or TAL analytes detected at elevated concentrations in on-site soil samples, and, characteristically, neither substance has a high degree of solubility or mobility.

- Lead and zinc were detected in the downgradient residential well samples at concentrations similar to those in the upgradient sample.

Targets within a 3-mile radius of the site potentially affected by TCL compounds and TAL analytes in the AOC include the 12,270 residents using Chippewa Falls municipal water and an additional population of approximately 3,040 residents obtaining water from private residential wells which are screened in the AOC, for a total population of 15,310. The population for those residents with private wells was calculated by counting the number of houses (1,030) within a 3-mile radius of the site, using a topographic map (USGS 1972) and multiplying this number by 2.95, the persons-per-household figure for Chippewa Falls County (U.S. Bureau of the Census 1982). All drinking water in the area is groundwater obtained from the AOC (Allen 1988).

5.3 SURFACE WATER

Surface water samples were not collected at the HTL site because no potential overland migration pathway leading from the site was observed prior to the SSI (USGS 1972).

The surface water bodies nearest to the site are three small gravel quarries that have filled with water. Two of these appeared to be inactive and were located approximately 200 feet south of the site. These third is still active and is located approximately 200 feet southwest of the site. These quarry ponds are probably discharge areas for groundwater. These ponds may be used for swimming by the local residents; however, no evidence of this activity was observed during the SSI. The ponds were not sampled because they were not identified at the time of the SSI work plan preparation.

The Chippewa River is located approximately 1/4 mile west of the site and is used for recreational purposes such as boating and fishing

(WCD 1963). Fisheries also exist along the Chippewa River in this area (WCD 1963). No potential exists for contaminants to migrate from the site to the river because of intervening terrain.

There is a potential for TCL compounds or TAL analytes to migrate to surface water bodies in the vicinity of the site via the eroded areas located along the west border and southwest corner of the site where the site boundary slopes sharply down to Shaffer Road. The potential for migration of contaminants appears to be low, however, because of the following factors.

- The TAL analytes detected in elevated concentrations in on-site soil samples are characterized by low solubility and mobility.

- Intervening terrain and residential areas separate the site from the surface water bodies.

Because surface water is not used for drinking water, the potential target population potentially affected by surface water migration of TCL compounds and TAL analytes from the site is constituted of those persons who use the surface water bodies for recreational purposes.

5.4 AIR

A release of TCL compounds and TAL analytes to the air was not documented during the SSI of the HTL site. During the reconnaissance inspection, FIT site-entry instruments (OVA 128, radiation monitor, colorimetric monitoring tubes for cyanide, and combination oxygen meter and explosimeter) did not detect levels above background concentrations at the site (E & E 1987). In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does exist for windblown particles to carry TCL compounds and/or TAL analytes from the site. This potential is low, however, because the majority of the site is covered with vegetation. The population within a 4-mile radius of the site is approximately 37,560 persons. This population was calculated in the same manner described in Subsection 5.2.

5.5 FIRE AND EXPLOSION

A small fire occurred on-site in 1987. The fire resulted from an out-of-control campfire which was started by persons gathering on the site grounds. There was no major damage to the site reported (McEathron 1989). Two abandoned campfire sites were observed on-site during the SSI, indicating that the site continues to be used for these purposes. It appears that the only potential for fire and/or explosion to occur on-site would be campfires occurring during such unauthorized use of the site, as the combination oxygen meter and explosimeter readings indicate that there is no apparent potential for fire and/or explosion at the HTL site from on-site factors.

The population within a 2-mile radius of the site potentially affected by a fire or explosion is approximately 5,090 persons. The approximate target population was calculated in the same manner described in Subsection 5.2.

5.6 DIRECT CONTACT

According to federal, state, and local file information revieved by FIT, there is no documentation of an incident of direct contact with TCL compounds and/or TAL analytes at the HTL site.

However, there is a potential that the public may come into contact with TCL compounds and/or TAL analytes detected at the site. The potential for direct contact is based on the following information.

- TCL compounds and TAL analytes were detected at the HTL site in surface soil samples.
- Access to the site is not restricted, the site is not completely fenced, and no other means of security is used at the site.
- Local residents use the dirt trail on-site as a walking/hiking trail.
- The HTL site is a location for gatherings of local teenagers.

The target population potentially affected by direct contact includes those persons residing within a 1-mile radius of the site, a population of 1,440 persons. The approximate target population was calculated in the same manner described in Subsection 5.2.

6. REFERENCES

Allen, John, January 15, 1988, telephone conservation, Superintendent, Chippewa Falls Water Department, contacted by Kenneth E. Dulik of E & E.

E & E, 1987, Quality Assurance Project Plan Region V FIT Conducted Site Inspections, Chicago, Illinois.

Harling, Ed, May 24, 1989, residential well owner, Chippewa Falls, Wisconsin, interview, conducted by Ted Nehrkorn of E & E.

Johnson, Dennis, May 23, 1989, Project Engineer, Owen Ayers and Associates, Inc., Eau Claire, Wisconsin, interview, conducted by Ted Nehrkorn and Regina Bayer of E & E.

McEathron, Dick, May 23, 1989, Road Superintendent, Hallie Township, Wisconsin, interview, conducted by Ted Nehrkorn and Regina Bayer of E & E.

Meier, Dave, May 23, 1989, Chairman, Hallie Township, Wisconsin, interview, conducted by Ted Nehrkorn and Regina Bayer of E & E.

SDWA, December 24, 1975, PL 93-523, 42 USC 300f.

State of Wisconsin, June 8, 1981, letter, to Shirley Hardinger, Madison WDNR office, from Jack Tritt, Eau Claire Area WDNR, regarding inspection of Hallie Township Landfill.

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U.S. EPA, February 12, 1988, Office of Solid Waste and Emergency Response, Pre-Remedial Strategy for Implementing SARA, Directive number 9345.2-01, Washington, D.C.

USGS, 1972, Albertville, Wisconsin Quadrangle; Chippewa Falls, Wisconsin Quadrangle; Eau Claire East, Wisconsin Quadrangle; Eau Claire West, Wisconsin Quadrangle; Falls Creek, Wisconsin Quadrangle; Lake Wissota, Wisconsin Quadrangle, 7.5 Minute Series: 1:24,000.

WCD, 1963, Surface Water Resources of Chippewa County, Madison, Wisconsin.

WDNR, March 20, 1972a, License Application for a Landfill Type of Solid Waste Disposal Operation, Township of Hallie Landfill.

_____, April 20, 1972b, Landfill Inspection Report, Township of Hallie Landfill.

_____, April 4, 1978, Landfill License Application, Township of Hallie Landfill.

_____, September 29, 1980, letter, to Zealious Joles, Chairman, Township of Hallie, from Jack S. Tritt, Environmental Specialist, WDNR.

_____, February 18, 1981a, Solid Waste Enforcement Report, Township of Hallie Landfill.

_____, April 13, 1981b, letter, to Zealious Joles, Chairman, Township of Hallie, from George Meyer, Administrator, WDNR.

_____, August 24, 1984, Solid Waste Incident Report, Hallie Town Landfill.

4177:3

APPENDIX A

SITE 4-MILE RADIUS MAP

SDMS US EPA Region V

Imagery Insert Form

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SITE 4-MILE RADIUS MAP

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APPENDIX B

U.S. EPA FORM 2070-13

Site Inspection Report

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION
01 STATE: WI | 02 SITE NUMBER: D981095920

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Hallie Town Landfill	SW 1/4, NW 1/4, sec 23, T. 28N., R 9W.				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Chippewa Falls	WI	54729	Chippewa	017	07

09 COORDINATES LATITUDE: 39° 21' 50".0 | LONGITUDE: 091° 23' 18".0

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ■ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 05 / 23 / 89 (MONTH DAY YEAR)

02 SITE STATUS: ☐ ACTIVE ■ INACTIVE

03 YEARS OF OPERATION: ~1953 (BEGINNING YEAR) | 1978 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ■ B. EPA CONTRACTOR Ecology & Environment (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ted NehrKorn	Environmental Engineer	E&E	(312) 663-9415
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
William Perpich	Water Resource Manager	E&E	(312) 663-9415
Karen M. Spangler	Environmental Engineer	E&E	(312) 663-9415
Regina Bayer	Water Chemist	E&E	(312) 663-9415
Jeffrey R. Dickson	Geologist	E&E	(312) 663-9415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Dave Meier	Chairman Hallie Township	957 Hagen Rd Chippewa Falls, WI	(715) 723-2911
Dennis L. Johnson, P.E.	Project Engineer Ayres Associates	1300 W. Clairemont, Ave Eau Claire, WI	(715) 834-3161
Dick Mc Eathron	Road Superintendent Hallie Township	957 Hagan Rd. Chippewa Falls, WI	(715) 723-2911
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	0930	A.M. - partly cloudy, upper 60S P.M. - Mostly Sunny, mid 70's

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Robin Schmidt	Wisconsin Department of Natural Res.	(608) 267-7569

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ted NehrKorn	U.S. EPA/FIT	E&E	(312) 663-9415	11 / 14 / 1989 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WI	098095920

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ■ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ■ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: Unknown
- CUBIC YARDS: Unknown
- NO. OF DRUMS: Unknown

03 WASTE CHARACTERISTICS (Check all that apply)

- ■ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ■ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			TCL compounds and TAL
PSD	PESTICIDES			analytes were detected
OCC	OTHER ORGANIC CHEMICALS	Unknown		in on-site soil samples.
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	For specific hazardous				
	substances found, please				
	refer to Table 4-1				
	Chemical Analysis of				
	soil sample Summary				
	Sheet and Table 4-2,				
	Chemical Analysis of				
	Residential Well Sample				
	Summary sheet.				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	N/A		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analyses, reports)

Laboratory Analytical Data
E&E-Chicago, Region II

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WI	D981095920

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION — 02 □ OBSERVED (DATE: _____) — ■ POTENTIAL — □ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 15,310
04 NARRATIVE DESCRIPTION

See Section 5-2 of Narrative

01 ■ B. SURFACE WATER CONTAMINATION — 02 □ OBSERVED (DATE: _____) — ■ POTENTIAL — □ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION

See Section 5-3 of Narrative.

01 ■ C. CONTAMINATION OF AIR — 02 □ OBSERVED (DATE: _____) — ■ POTENTIAL — □ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 37,560
04 NARRATIVE DESCRIPTION

See Section 5-4 of Narrative

01 ■ D. FIRE/EXPLOSIVE CONDITIONS — 02 ■ OBSERVED (DATE: 1987) — □ POTENTIAL — □ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 5090
04 NARRATIVE DESCRIPTION

See Section 5-5 of Narrative

01 ■ E. DIRECT CONTACT — 02 □ OBSERVED (DATE: _____) — ■ POTENTIAL — □ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 440
04 NARRATIVE DESCRIPTION

See Section 5-6 of Narrative

01 ■ F. CONTAMINATION OF SOIL — 02 ■ OBSERVED (DATE: 5/23/89) — □ POTENTIAL — □ ALLEGED
03 AREA POTENTIALLY AFFECTED: 4.0 (Acres)
04 NARRATIVE DESCRIPTION

See Table 4-1, Analytical Summary

01 ■ G. DRINKING WATER CONTAMINATION — 02 □ OBSERVED (DATE: _____) — ■ POTENTIAL — □ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 15,310
04 NARRATIVE DESCRIPTION

See Section 5-2 of Narrative

01 □ H. WORKER EXPOSURE/INJURY — 02 □ OBSERVED (DATE: _____) — □ POTENTIAL — □ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Currently no on-site workers.

01 ■ I. POPULATION EXPOSURE/INJURY — 02 □ OBSERVED (DATE: _____) — ■ POTENTIAL — □ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 37,560
04 NARRATIVE DESCRIPTION

See Section 5 of Narrative

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: WI | 02 SITE NUMBER: 0981095920

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ■ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
A potential exists for plant life to become affected by the intake of TCL compounds or TAL analytes through there root systems

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species)
A potential exists for animal life in the area to be affected by TCL compounds and/or TAL analytes detected on site.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None observed

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ■ OBSERVED (DATE: 5123189) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 37,560 — 04 NARRATIVE DESCRIPTION
TCL compounds and TAL analytes were detected in on-site soil samples.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None observed or Documented

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None observed or Documented

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None observed or Documented

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 37,560

IV. COMMENTS
The site has been closed, graded and seeded and the majority of the site is covered with vegetation. The site is a popular party place for local residents.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
E&E - Chicago, Region V

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WI	D981095920

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
■ G. STATE (Specify) Sanitary Landfill License	1771	10/71	1978	Licensed for sanitary wastes from Hollie Township to be deposited
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
■ F. LANDFILL	4	Acres
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify) NA

05 OTHER
- ☐ A. BUILDINGS ON SITE NA

06 AREA OF SITE: 6.6 (Acres)

07 COMMENTS
The only hazardous waste allegedded to have been deposited in the landfill is approximately 100 gallons of VOC's including 1,1,1- Trichloroethane and Trichloroethylene deposited by Control Data between 1962 and 1972.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)
☐ A. ADEQUATE, SECURE ☐ B. MODERATE ■ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.
The site is not fenced along the south side and the southeast corner. Only approximately 1/3 of the west side is fenced. A dirt path runs through the site and is use frequently as a hiking path by local residents.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ■ YES ☐ NO

02 COMMENTS: TCL Compounds and TAL analytes were detected in on site surface soil samples. Exposed debris was also observed on site.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

E & E - Chicago, Region V

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WI	D981095920

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ■
NON-COMMUNITY	C. ☐	D. ■

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ■
D. ☐	E. ☐	F. ☐ UNKNOWN

03 DISTANCE TO SITE

A. ~2 (mi)
B. ~50 (mi) ft

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

■ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available)

02 POPULATION SERVED BY GROUND WATER 15,310

03 DISTANCE TO NEAREST DRINKING WATER WELL ~50 (mi) ft

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
12 (ft)	West - Southwest	12 (ft)	NA (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

See Section 5-2 of Narrative

10 RECHARGE AREA		11 DISCHARGE AREA	
■ YES ☐ NO	COMMENTS: Recharge area through local rainfall percholating to groundwater,	■ YES ☐ NO	COMMENTS: Discharge through quarry pits and Chippewa River

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

■ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Chippewa River	☐	~1/4 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 440 NO. OF PERSONS	B. 5090 NO. OF PERSONS	C. 19,720 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

~50 ft (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

~1500

04 DISTANCE TO NEAREST OFF-SITE BUILDING

~50 ft (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

See Section 3-4 of Narrative

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WI	D981095920

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ■ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ■ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
40-110 (ft)	NA (ft)	NA	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-1 (in)	2.4 (in)	~20 %	S-SW	~5 %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. NA (mi)	B. ~400 ft (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

NA (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS	
		PRIME AG LAND	AG LAND
A. ~1/8 (mi)	B. 50 ft (mi)	C. NA (mi)	D. Adjacent (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

See Appendix A in Narrative

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E & E - Chicago, Region V

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WI	D981095920

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	5	See Section 3-4 of Narrative	on file
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	7	See Section 3-4 of Narrative	on file
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA - 128	No Readings Above Background in Breathing Zone
Rad- mini	No Readings Above Background Obtained
Explosimeter	No Readings Above Background Obtained
O_2 Meter	All Readings Obtained Were Within Range
Drager Tubes (HCN)	No Readings Above Background Obtained

IV. PHOTOGRAPHS AND MAPS

01 TYPE ■ GROUND ☐ AERIAL

02 IN CUSTODY OF E?E
(Name of organization or individual)

03 MAPS ■ YES ☐ NO

04 LOCATION OF MAPS E?E - Chicago, Region V

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

The field parameters pH, temperature and conductivity were collected for the residential well samples. See Table 4-2 for these analyses.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E?E - Chicago, Region V

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WI	D98109 5920

II. CURRENT OWNER(S) | **PARENT COMPANY** (if applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Hallie Township		NA	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
957 Hagan Rd			

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
Chippewa Falls	WI	54729			

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**

05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first) | **IV. REALTY OWNER(S)** (if applicable; list most recent first)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NA		NA	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**04 SIC CODE**

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**04 SIC CODE**

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**04 SIC CODE**

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E&E -Chicago, Region V

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WI	D981095920

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
NA	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
NA	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
NA	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E&E - Chicago, Region V

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WI	D981095920

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
NA	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NA			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
American Disposal		Dresels Garbage Service	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Mewhorter Disposal		Mikes Garbage Service	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IV Transporter(s) Continued
Sanitary Disposal, Inc.

E & E - Chicago, Region V

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WI	D981095920

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ O. EMERGENCY DIKING SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WI	D981095920

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ● S. CAPPING/COVERING — 02 DATE 6/21/1981 — 03 AGENCY WDNR
04 DESCRIPTION
WDNR inspected the site and found it to be properly closed, covered, and seeded.

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E?E-Chicago, Region V

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WI	D981095920

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ■ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

WDNR requested a number of improvements to the landfill in 1971. The regulatory improvements included posting of the license number at the site, controlling rodents and insects, discontinuing the open burning at the site and improving the compacting of debris and daily cover. These improvements were satisfactory completed.

WDNR recommended that a number of tires which had been deposited at the site to be properly covered.

In 1980 WDNR requested that the site be completely covered with 2 feet of soil and 6 inches of top soil, seeded and fenced to limit accessibility. These requirements were needed to be completed before the site could be properly abandoned. These requirements were fulfilled and the site was officially closed on June 2, 1981.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E & E - Chicago, Region V

EPA FORM 2070-13 (7-81)

APPENDIX C

PIT SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 1 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI01495A

DATE: 5/23/89

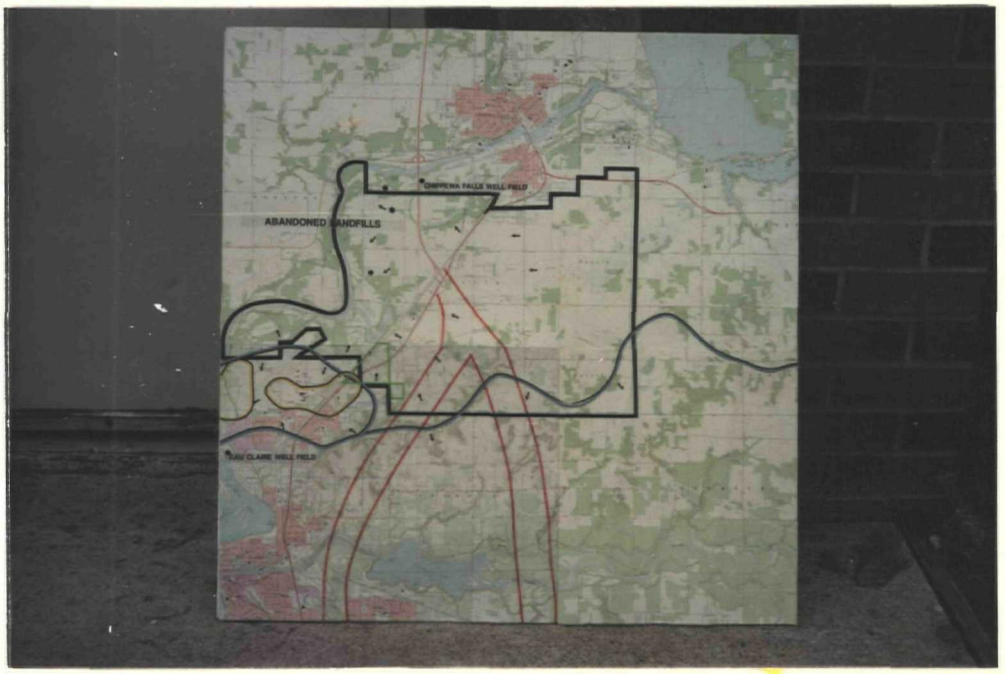
TIME: 1008

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: PARTLY CLOUDY MID 60'S

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):



DESCRIPTION: Map of Hallie Township showing the two abandoned landfills.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 2 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI01495A

DATE: 5/23/89

TIME: 1230

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):

DESCRIPTION: Entrance and access road to the landfill.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 3 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

TIME: 1230

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):

DESCRIPTION: Northern portion of land fill looking toward the entrance gate.

DATE: 5/23/89

TIME: 1230

DIRECTION OF PHOTOGRAPH: W

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):

DESCRIPTION: Western end of the land fill.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 4 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

TIME: 1230

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):

DESCRIPTION: Eastern end of land fill.

DATE: 5/23/89

TIME: 1230

DIRECTION OF PHOTOGRAPH: SE

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):

DESCRIPTION: Southeast Corner of landfill.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 5 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

TIME: 1235

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):

DESCRIPTION: Trail entering the site from the south.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 6 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

TIME: 1425

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):

DESCRIPTION: West side of the site photographed from Shaffer Rd.

DATE: 5/23/89

TIME: 1420

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable):

DESCRIPTION: Southwest Corner of the site photographed from Shaffer Rd.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 7 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

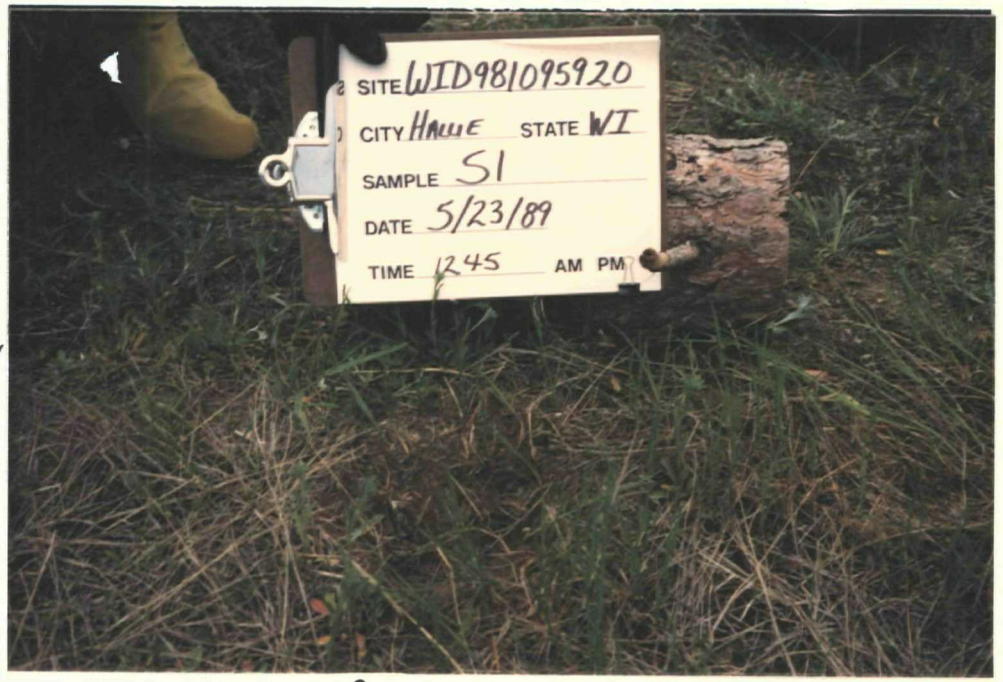
TIME: 1245

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S1



DESCRIPTION: Close up View of soil sample S1 collected near an old campfire.

DATE: 5/23/89

TIME: 1245

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S1

DESCRIPTION: Perspective view of soil sample S1.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 8 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

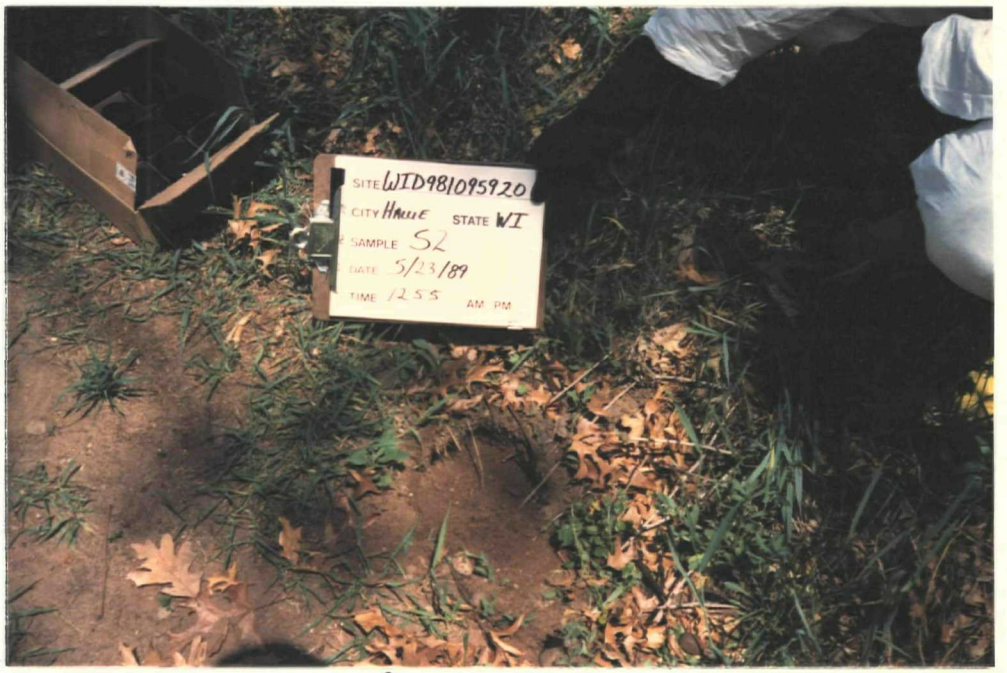
TIME: 1255

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S2



DESCRIPTION: Close up view of soil sample S2 collected near dirt trail on south side of the site.

DATE: 5/23/89

TIME: 1255

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S2

DESCRIPTION: Perspective view of soil sample S2.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 9 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

TIME: 1310

DIRECTION OF PHOTOGRAPH: W

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S3

DESCRIPTION: Close up view of soil sample S3 collected from an area at the bottom of a gully on the south west corner.

DATE: 5/23/89

TIME: 1310

DIRECTION OF PHOTOGRAPH: W

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S3

DESCRIPTION: Perspective view of soil sample S3.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 10 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

TIME: 1320

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S4

DESCRIPTION: Close up view of soil sample S4 collected from an eroded area on the west side of the site.

DATE: 5/23/89

TIME: 1320

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S4

DESCRIPTION: Perspective view of soil sample S4.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 11 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

TIME: 1350

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. Nehr Korn

SAMPLE ID (if applicable): S5

DESCRIPTION: Close up view of soil sample S5 collected at depth along the fence line along the north side of the site.

DATE: 5/23/89

TIME: 1350

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S5

DESCRIPTION: Perspective view of soil sample S5.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 12 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

TIME: 1405

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S6

DESCRIPTION: Close up view of soil sample S6 collected from the south side of the site.

DATE: 5/23/89

TIME: 1405

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S6

DESCRIPTION: Perspective view of soil sample S6.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 13 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/23/89

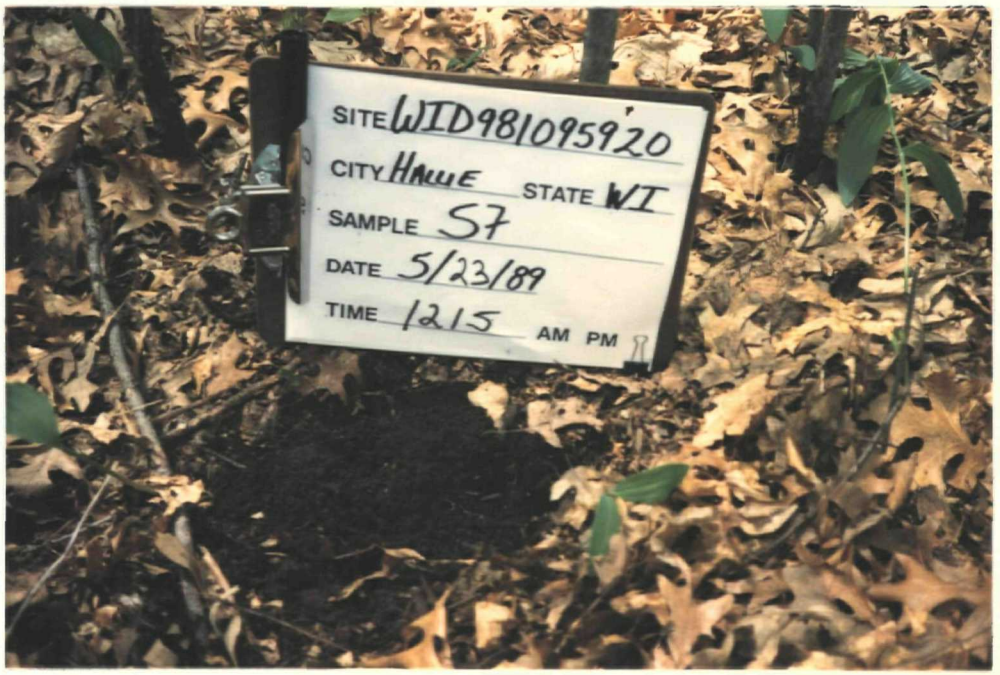
TIME: 1215

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S7



DESCRIPTION: Close up view of soil sample S7, a potential background sample collected from a wooded area approximately 1 mile north of the site.

DATE: 5/23/89

TIME: 1215

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Mostly Sunny Mid 70's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): S7

DESCRIPTION: Perspective view of soil sample S7.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 14 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/24/89

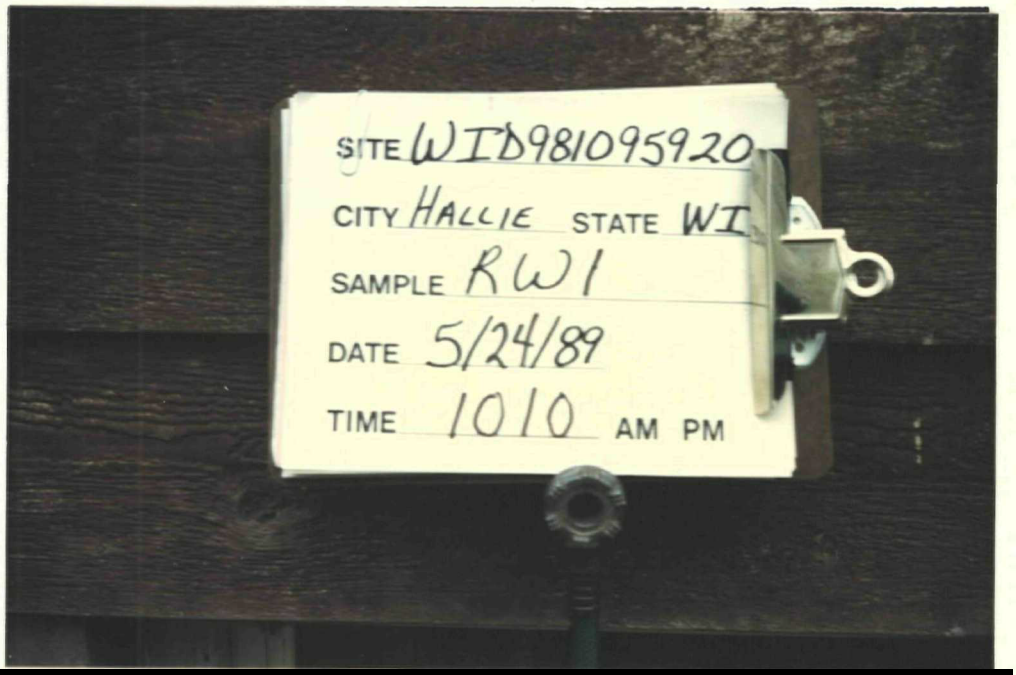
TIME: 1135

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Partly Cloudy Mid 60's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): RW1



Non-responsive

DATE: 5/24/89

TIME: 1135

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Partly Cloudy Mid 60's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): RW1

DESCRIPTION: Perspective view of Residential Well Sample RW.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 15 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/24/89

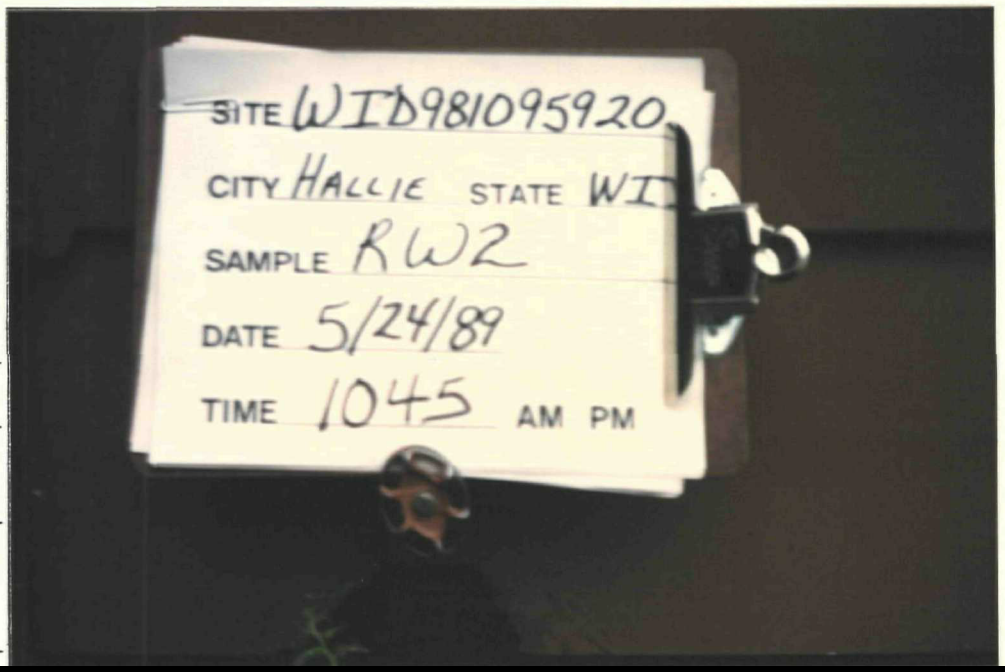
TIME: 1045

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Partly Cloudy Mid 60's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): RW2



Non-responsive

DATE: 5/24/89

TIME: 1045

DIRECTION OF PHOTOGRAPH: S

WEATHER CONDITIONS: Partly Cloudy Mid 60'S

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): RW2

DESCRIPTION: Perspective view of residential well sample RW2.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 16 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/24/89

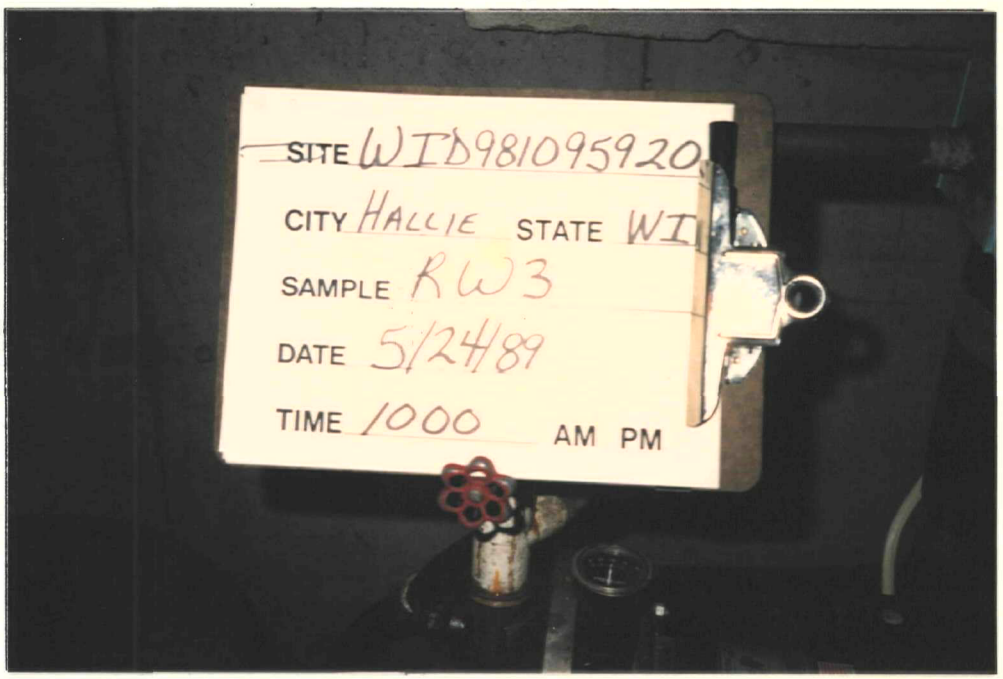
TIME: 1000

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Partly Cloudy Mid 60's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): RW3



Non-responsive

DATE: 5/24/89

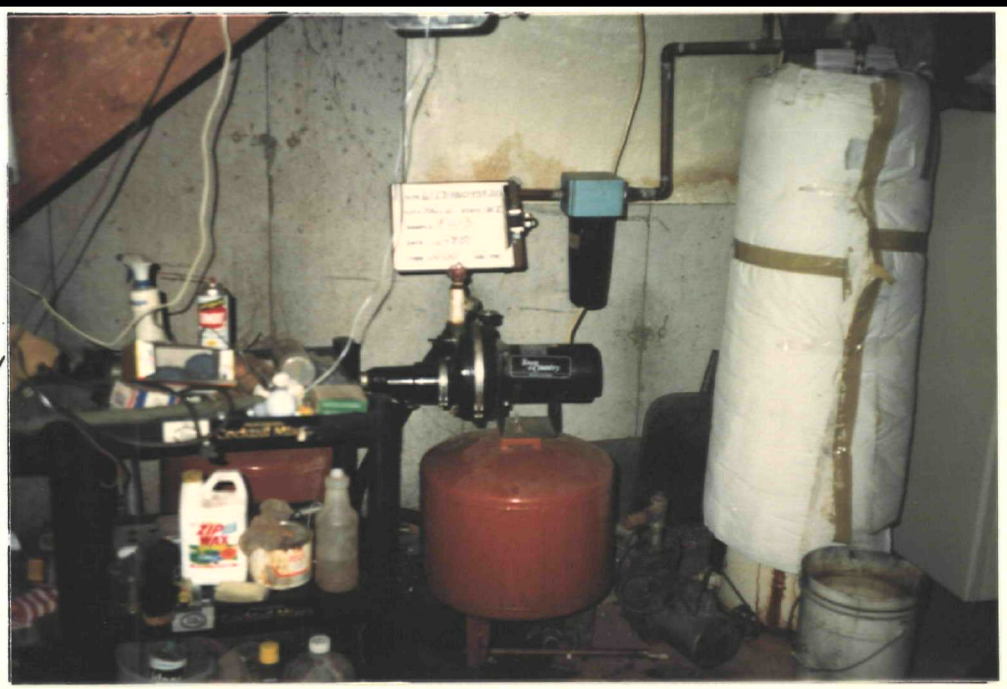
TIME: 1000

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Partly Cloudy Mid 60's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): RW3



DESCRIPTION: Perspective view of residential well sampling location RW3.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 17 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 5/24/89

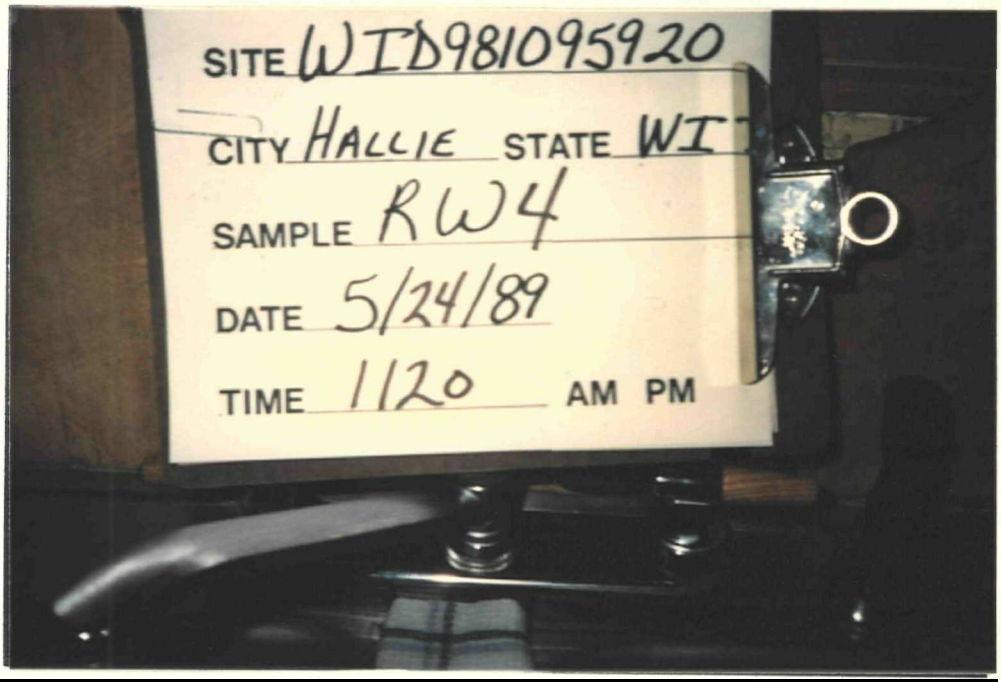
TIME: 1120

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Partly Cloudy Mid 60's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): RW4



Non-responsive

DATE: 5/24/89

TIME: 1120

DIRECTION OF PHOTOGRAPH: E

WEATHER CONDITIONS: Partly Cloudy Mid 60's

PHOTOGRAPHED BY: T. NehrKorn

SAMPLE ID (if applicable): RW4

DESCRIPTION: Perspective view of residential well sampling location RW4

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: HALLIE TOWN LANDFILL PAGE 18 OF 18

U.S. EPA ID: WID981095920 TDD: F05-8905-015 PAN: FWI0149SA

DATE: 10/24/89

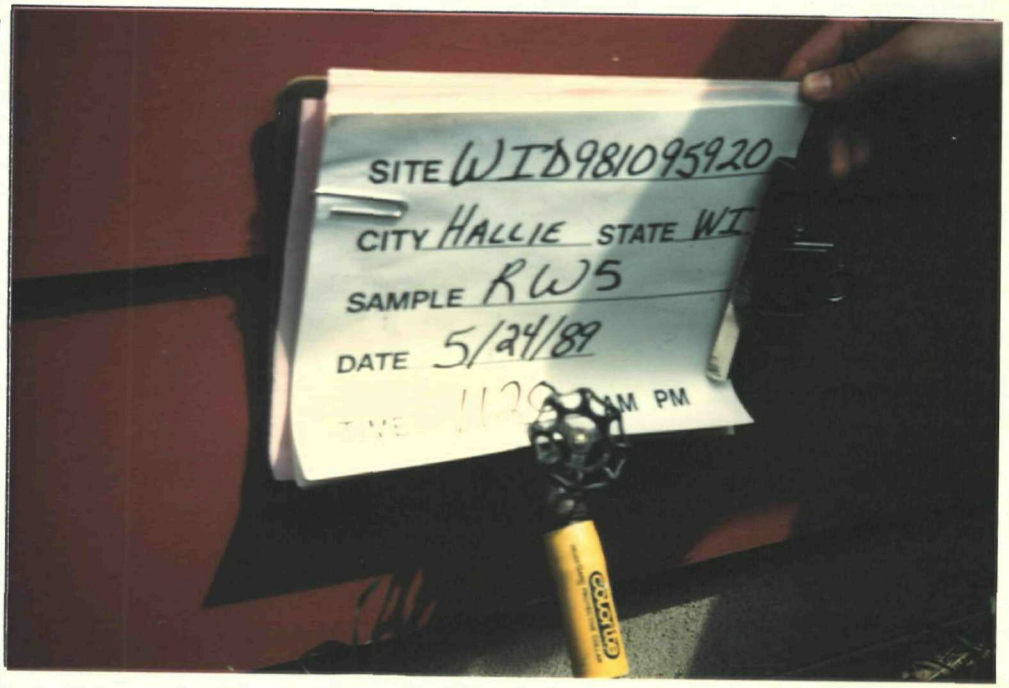
TIME: 1130

DIRECTION OF PHOTOGRAPH: N

WEATHER CONDITIONS: Partly Cloudy Mid 60's

PHOTOGRAPHED BY: T. Nehrkorn

SAMPLE ID (if applicable): RW5



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APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS

ADDENDUM A

ROUTINE ANALYTICAL SERVICES
CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Table A (Cont.)

CONTRACT LABORATORY PROGRAM

TARGET ANALYTE LIST (TAL)

INORGANIC DETECTION LIMITS

Compound	Procedure	Detection Limits	
		Water (µg/L)	Soil Sediment Sludge (mg/kg)
aluminum	ICP	200	40
antimony	furnace	60	2.4
arsenic	furnace	10	2
barium	ICP	200	40
beryllium	ICP	5	1
cadmium	ICP	5	1
calcium	ICP	5,000	1,000
chromium	ICP	10	2
cobalt	ICP	50	10
copper	ICP	25	5
iron	ICP	100	20
lead	furnace	5	1
magnesium	ICP	5,000	1,000
manganese	ICP	15	3
mercury	cold vapor	0.2	0.008
nickel	ICP	40	8
potassium	ICP	5,000	1,000
selenium	furnace	5	1
silver	ICP	10	2
sodium	ICP	5,000	1,000
thallium	furnace	10	2
tin	ICP	40	8
vanadium	ICP	50	10
zinc	ICP	20	4
cyanide	color	10	2

3767:1

ADDENDUM C

SPECIAL ANALYTICAL SERVICES
DETECTION LIMITS

Drinking Water Samples

TABLE C
SPECIAL ANALYTICAL SERVICES DRINKING WATER
VOLATILE QUANTITATION LIMITS

PARAMETER	CAS #	DETECTION LIMIT IN REAGENT WATER
Benzene	71-43-2	1.5 ug/L
Bromodichloromethane	75-27-4	1.5
Bromoform	75-25-2	1.5
Bromomethane	74-83-9	1.5
Carbon tetrachloride	56-23-5	1.5
Chlorobenzene	108-90-7	1.5
Chloroethane	75-00-3	1.5
2-Chloroethyl vinyl ether	110-75-8	1.5
Chloroform	67-66-3	1.5
Chloromethane	74-87-3	1.5
Dibromochloromethane	124-48-1	1.5
1,1-Dichloroethane	75-34-3	1.5
1,2-Dichloroethane	107-06-2	1.5
1,1-Dichloroethene	75-35-4	1.5
Total-1,2-Dichloroethene	540-59-0	1.5
1,2-Dichloropropane	78-87-5	1.5
cis-1,3-Dichloropropene	10061-01-5	2
trans-1,3-Dichlopropropene	10061-02-6	1
Ethyl benzene	100-41-4	1.5
Methylene chloride *	75-09-2	1
1,1,2,2-Tetrachloroethane	79-34-5	1.5
Tetrachloroethene	127-18-4	1.5
Toluene *	108-88-3	1.5
1,1,1-Trichloroethane	71-55-6	1.5
1,1,2-Trichloroethane	79-00-5	1.5
Trichloroethene	79-01-6	1.5
Vinyl chloride	75-01-4	1.5
Acrolein	107-02-8	25
Acetone *	67-64-1	5
Acrylonitrile	107-13-1	25
Carbon disulfide	75-15-0	3
2-Butanone	78-93-3	5
Vinyl acetate	108-05-4	5
4-Methyl-2-pentanone	108-10-1	1.5
2-Hexanone	519-78-6	5
Styrene	100-42-5	1
Xylene (total)	1330-02-7	1.5

* Common laboratory solvents.
Blank limit is 5x method detection limit.
( ) Values in parentheses are estimates.
actual values are being determined at this time.

TABLE C (cont.)
SAS DRINKING WATER
SEMIVOLATILES QUANTITATION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Aniline	62-53-3	1.5 ug/l
Bis(2-chloroethyl)ether	111-44-4	1.5
Phenol	108-95-2	2
2-Chlorophenol	95-57-8	2
1,3-Dichlorobenzene	541-73-1	2
1,4-Dichlorobenzene	106-46-7	2
1,2-Dichlorobenzene	95-50-1	2.5
Benzyl alcohol	100-51-6	2
Bis(2-chloroisopropyl)ether	39638-32-9	2.5
2-Methylphenol	95-48-7	1
Hexachloroethane	67-72-1	2
n-Nitrosodipropylamine	621-64-7	1.5
Nitrobenzene	98-95-3	2.5
4-Methylphenol	106-44-5	1
Isophorone	78-59-1	2.5
2-Nitrophenol	88-75-5	2
2,4-Dimethylphenol	105-67-9	2
Bis(2-Chloroethoxy)methane	111-91-1	2.5
2,4-Dichlorophenol	120-83-2	2
1,2,4-Trichlorobenzene	120-82-1	2
Naphthalene	91-20-3	2
4-Chloroaniline	106-47-8	2
Hexachlorobutadiene	87-68-3	2.5
Benzoic Acid	65-85-0	20
2-Methylnapthalene	91-57-6	2
4-Chloro-3-methylphenol	59-50-7	1.5
Hexachlorocyclopentadiene	77-47-4	2
2,4,6-Trichlorophenol	88-06-2	1.5
2,4,5-Trichlorophenol	95-95-4	1.5
2-Chloronapthalene	91-58-7	1.5
Acenapthylhene	208-96-8	1.5
Dimethyl phthalate	131-11-3	1.5
2,6-Dinitrotoluene	606-20-2	1
Acenaphthene	83-32-9	1.5
3-Nitroaniline	99-09-2	2.5
Dibenzofuran	132-64-9	1
2,4-Dinitrophenol	51-28-5	(15)
2,4-Dinitrotoluene	121-14-2	1

TABLE C (Cont.)
SAS DRINKING WATER
SEMIVOLATILE QUANTITATION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Fluorene	86-73-7	1 ug/L
4-Nitrophenol	100-02-7	1.5
4-Chlorophenyl phenyl ether	7005-72-3	1
Diethyl phthalate	84-66-2	1
4,6-Dinitro-2-methylphenol	534-52-1	(15)
1,2-Diphenylhydrazine	122-66-7	1
n-Nitrosodiphenylamine *	86-30-6	
Diphenylamine *	122-39-4	1.5
4-Nitroaniline	100-01-6	3
4-Bromophenyl-phenylether	101-55-3	1.5
Hexachlorobenzene	118-74-1	1.5
Pentachlorophenol	87-86-5	2
Phenanthrene	85-01-8	1
Anthracene	120-12-7	2.5
di-n-Butyl phthalate	84-74-2	2
Fluoranthene	206-44-0	1.5
Pyrene	129-00-0	1.5
Butyl benzyl phthalate	85-68-7	3.5
Chrysene **	218-01-9	
Benzo(A)Anthracene **	56-55-3	1.5
bis(2-ethylhexyl)phthalate	117-81-7	1
di-n-Octyl phthalate	117-84-0	1.5
Benzo(b)fluoranthene ***	205-99-2	
Benzo(k)fluoranthene ***	207-08-9	1.5
Benzo(a)pyrene	50-32-8	2
Indeno(1,2,3-cd)pyrene	193-39-5	3.5
Dibenzo(a,h)anthracene	53-70-3	2.5
Benzo(g,h,i)perylene	191-24-2	4
2-Nitroaniline	88-74-4	1

* These two parameters are reported as a total.
** These two parameters are reported as a total.
*** These two parameters are reported as a total.

( ) Values in parentheses are estimates.
The actual values are being determined at this time.

Note: Limits are for reagent water.

TABLE C (Cont.)
SAS DRINKING WATER
PESTICIDE AND PCB QUANTITATION LIMITS

PARAMETER	CAS #	DETECTION LIMIT
Aldrin	309-00-2	0.005 ug/L
alpha BHC	319-84-6	0.010
beta BHC	319-85-7	0.005
delta BHC	319-86-8	0.005
gamma BHC (Lindane)	58-89-9	0.005
alpha-Chlordane	5103-71-9	0.020
gamma-Chlordane	5103-74-2	0.020
4,4'-DDD	72-54-8	0.020
4,4'-DDE	72-55-9	0.005
4,4'-DDT	50-29-3	0.020
Dieldrin	60-57-1	0.010
Endosulfan I	959-98-8	0.010
Endosulfan II	33213-65-9	0.010
Endosulfan sulfate	1031-07-8	0.10
Endrin	72-20-8	0.010
Endrin Aldehyde	7421-93-4	(0.030)
Endrin Ketone	53494-70-5	0.030
Heptachlor	76-44-8	0.030
Heptachlor Epoxide	1024-57-3	0.005
4,4'-Methoxychlor	72-43-5	0.020
Toxaphene	8001-35-2	0.25
Aroclor-1016	12674-11-2	0.10
Aroclor-1221	11104-28-2	0.10
Aroclor-1232	11141-16-5	0.10
Aroclor-1242	53469-21-9	0.10
Aroclor-1248	12672-29-6	0.10
Aroclor-1254	11097-69-1	0.10
Aroclor-1260	11096-82-5	0.10

( ) Values in parentheses are estimates.
Actual values are being determined at this time.

Note: Limits are for reagent water.

TABLE C (Cont.)
SAS DRINKING WATER
INORGANIC DETECTION LIMITS

PARAMETER	PROCEDURE	DETECTION LIMIT
Aluminum	ICP	100
Antimony	GFAA	5
Arsenic	GFAA	5
Barium	ICP	50
Beryllium	ICP	5
Cadmium	GFAA	0.5
Calcium	ICP	1000
Chromium	ICP	10
Cobalt	ICP	10
Copper	ICP	10
Iron	ICP	100
Lead	GFAA	2
Magnesium	ICP	1000
Manganese	ICP	10
Mercury	Cold Vapor	0.2
Nickel	ICP	20
Potassium	ICP	2000
Selenium	GFAA	2
Silver	ICP	5
Sodium	ICP	1000
Thallium	GFAA	2
Tin	ICP	40
Vanadium	ICP	10
Zinc	ICP	20
Cyanide	Colorimetric	10

Note: The above list may or may not contain compounds that are routinely analyzed at CRL for low level detection limits for drinking water.

See inorganic Routine Analytical Services (RAS) for related CAS #.

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

WELL LOG # 1

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 2-79
NOV 10 1986

1. COUNTY: Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City

Name: Hallie

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
10		39		47		42				

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pneumatic Tank
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other		69		Seepage Pit	
				Clearwater Dr.	Clearwater Sump						Seepage Bed 81	
											Seepage Trench	

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well									
		Pump									
		Tank									

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin / Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	102			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	Steel T&C new black	Surface	99
	19.45# per Ft .280 wall		
	ASTM A53 NKK Steel		
	5"X3' Johnson Screen	99	102

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
–	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Topsoil	Surface	1
sand	1	18
Sand & gravel	18	102

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool
☐ Rotary-air w/drilling mud
☐ Rotary-w/drilling mud
☐ Rotary-hammer w/drilling mud & air
☐ Rotary-hammer & air
☐ Reverse Rotary
☐ Jetting with: ☐ Air ☐ Water

Well construction completed on 10-20 1986

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 12 GPM

Depth from surface to normal water level 84 Ft.

Depth of water level when pumping 87 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 12 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Eau Claire laboratory on 10-21 1986

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature

Business Name and Complete Mailing Address
K. Olson Well Drilling

WELL LOG # 2

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 12-79

JAN 16 1981

1. COUNTY Chippewa CHECK (✓) ONE: [X] Town [ ] Village [ ] City Name Hollie

[redacted]

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
6										

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer / Clearwater Dr. / Sewage Sump / Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit: Seepage Pit / Seepage Bed / Seepage Trench	Manure Hopper or Retention or Pnuematic Tank
								50		Seepage Trench 80	

Privy	Pet Waste Pit	Pit: Nonconforming Existing (Well / Pump / Tank)	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin: Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Human

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	105			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	New Steel Threaded & Coupled To Shape Ware A53 Valley Steel Pipe	Surface	58

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
None	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand + Gravel	Surface	58
Sand Rock	58	105

10. TYPE OF DRILLING MACHINE USED

[ ] Cable Tool
[X] Rotary-air w/drilling mud
[ ] Rotary-w/drilling mud
[ ] Rotary-hammer w/drilling mud & air
[ ] Rotary-hammer & air
[ ] Reverse Rotary
[ ] Jetting with [ ] Air [ ] Water

Well construction completed on 11-1 1980

11. MISCELLANEOUS DATA

Yield Test: 2 Hrs. at 10 GPM

Well is terminated 10 inches [X] above [ ] below final grade

Depth from surface to normal water level 80 Ft.

Well disinfected upon completion [X] Yes [ ] No

Depth of water level when pumping 80 Ft. Stabilized [X] Yes [ ] No

Well sealed watertight upon completion [X] Yes [ ] No

Water sample sent to Madison laboratory on 12-1 1980

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature [illegible]

Business Name and Complete Mailing Address [illegible]

WELL LOG # 3

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 2-79

SEP 0 1982

1. COUNTY: Chippewa

CHECK (✓) ONE: ☑ Town ☐ Village ☐ City

Name: Hallie

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
4	17									

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pnuematic Tank
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other				Seepage Pit	
				Clearwater Dr.	Clearwater Sump				54		Seepage Bed 65	
											Seepage Trench	

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well	Nonconforming Existing								
		Pump									
		Tank									

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin	Other (Describe)
					Concrete Floor Only	
					Concrete Floor and Partial Concrete Walls	

5. Well is intended to supply water for: Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	95			

7. CASING, LINER, CURBING AND SCREEN
Material, Weight, Specification

Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	STEEL 18.97 A53 WELDED	Surface	42

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
SAND	Surface	42
SAND ROCK	42	95

10. TYPE OF DRILLING MACHINE USED

☑ Cable Tool
☐ Rotary-air w/drilling mud
☐ Rotary-w/drilling mud
☐ Rotary-hammer w/drilling mud & air
☐ Rotary-hammer & air
☐ Reverse Rotary
☐ Jetting with Air / Water

Well construction completed on 6 JUNE 19 82

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 15 GPM

Depth from surface to normal water level 76 Ft.

Depth of water level when pumping 81 Ft. Stabilized ☑ Yes ☐ No

Well is terminated 13 inches ☑ above ☐ below final grade

Well disinfected upon completion ☑ Yes ☐ No

Well sealed watertight upon completion ☑ Yes ☐ No

Water sample sent to EAU CLAIRE laboratory on 17 JUNE 19 82

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature [illegible]

Business Name and Complete Mailing Address [illegible]

plot CH-529

WELL LOG # 4

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 2-79

DEC 30 1983

1. COUNTY: Chippewa

CHECK (✓) ONE: ☑ Town ☐ Village ☐ City

Name: Wheaton

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
6										

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pnuematic Tank
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other				Seepage Pit	
				Clearwater Dr.	Clearwater Sump				NONE		Seepage Bed	
											Seepage Trench NONE	

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well	Nonconforming Existing								
		Pump									
		Tank									

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin Concrete Floor Only Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Human

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	43½			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	New Steel Threaded & Cuppled 20 lbs per ft. ASTM A-120 1200 PSI Valley Steel Pipe	Surface	41
	5" by 3 ft. Johnson Screen	40½	43½

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
NONE	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
SAND	Surface	43½

10. TYPE OF DRILLING MACHINE USED

☑ Cable Tool
☐ Rotary-air w/drilling mud
☐ Rotary-w/drilling mud
☐ Rotary-hammer w/drilling mud & air
☐ Rotary-hammer & air
☐ Reverse Rotary
☐ Jetting with: ☐ Air ☐ Water

Well construction completed on 11-4 19 83

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 10 GPM

Depth from surface to normal water level 22 Ft.

Depth of water level when pumping 22 Ft. Stabilized ☑ Yes ☐ No

Well is terminated 12 inches ☑ above ☐ below final grade

Well disinfected upon completion ☑ Yes ☐ No

Well sealed watertight upon completion ☑ Yes ☐ No

Water sample sent to Madison laboratory on 11-7 19 83

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature

Business Name and Complete Mailing Address

WELL LOG # 5

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 2-79

1. COUNTY: Chippewa

CHECK (✓) ONE: ☒ Town ☐ Village ☐ City

Name: Hallie

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Floor Drain Connected To: C.I. Sewer	Floor Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
8		12		22						

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer	Foundation Drain Connected to: Sewage Sump	Foundation Drain Connected to: Clearwater Dr.	Foundation Drain Connected to: Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pneumatic Tank
											32		Seepage Pit; Seepage Bed 64; Seepage Trench	

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well; Pump; Tank									

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin; Concrete Floor Only; Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Mobile Home

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
5	Surface	39			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
5	Steel T&C New BLK 15.00# Perft 258 WALL ASTM A-120 Union Steel	Surface	36 ft.
5" By	3' Johnson Screen	36	39

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
NONE	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Top Soil	Surface	1
sand & gravel	1	4
sand & clay	4	7
sand & gravel	7	39

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool
☐ Rotary-air w/drilling mud
☐ Rotary-w/drilling mud
☐ Rotary-hammer w/drilling mud & air
☐ Rotary-hammer & air
☐ Reverse Rotary
☐ Jetting with Air / Water

Well construction completed on May 2 19 83

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 15 GPM

Depth from surface to normal water level 12 Ft.

Depth of water level when pumping 14 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 12 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Eau Claire laboratory on May 11 19 83

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature

Business Name and Complete Mailing Address: Ron Olson Well Drilling

Plot CH-530

WELL LOG # 6

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 2-79

RECEIVED JUL 20 1981
JUN 18

1. COUNTY: Chippewa
CHECK (✓) ONE: ☒ Town ☐ Village ☐ City
Name: Hallie
¼ Section or Gov't. Lot | Section | Township | Range | 2. NAME ☒ OWNER ☐ AGENT AT TIME OF DRILLING (CHECK (✓) ONE)

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
Nothing in at this date										

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pnuematic Tank
San.	Storm	C.I.	Other	Sewer		Sewage Sump					Seepage Pit	
				Clearwater Dr.		Clearwater Sump					Seepage Bed	
											Seepage Trench	

Privy	Pet Waste Pit	Pit: Nonconforming Existing		Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin
		Well		Nonconforming Existing								
		Pump										
		Tank										

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin	Other (Describe)
					Concrete Floor Only	
					Concrete Floor and Partial Concrete Walls	

5. Well is intended to supply water for: Duplex

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
6	Surface	107			

7. CASING, LINER, CURBING AND SCREEN
Material, Weight, Specification

Dia. (in.)	Mfg. & Method of Assembly	From (ft.)	To (ft.)
6	Steel T&C new black	Surface	87
	19.45# per ft. 280 wall		
	ASTM A53		
	Sumitomo Metal Ind		

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
None	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Topsoil	Surface	1
Sand	1	6
Sand & gravel	6	32
Sand	32	41
Sand & gravel	41	64
Soft sand rock	64	69
Firm sand rock	69	107

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on 6-15 19 81

11. MISCELLANEOUS DATA
Yield Test: 2 Hrs. at 25 GPM
Depth from surface to normal water level 72 Ft.
Depth of water level when pumping 86 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 12 inches ☒ above ☐ below final grade
Well disinfected upon completion ☒ Yes ☐ No
Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Eau Claire laboratory on 6-16 19 81

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: [illegible]

Business Name and Complete Mailing Address: K. Olson Well Drilling

WELL LOG # 7

State of Wisconsin
Department of Natural Resources
Private Water Supply
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300-15 Rev. 2-79

JUL 14 1981

1. COUNTY Chippewa CHECK (✓) ONE: ☒ Town ☐ Village ☐ City Name Hallie

[redacted]

Non-responsive

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain C.I.	Sanitary Bldg. Drain Other	Sanitary Bldg. Sewer C.I.	Sanitary Bldg. Sewer Other	Drain Connected To: C.I. Sewer	Drain Connected To: Other Sewer	Storm Bldg. Drain C.I.	Storm Bldg. Drain Other	Storm Bldg. Sewer C.I.	Storm Bldg. Sewer Other
None										

Street Sewer San.	Street Sewer Storm	Other Sewers C.I.	Other Sewers Other	Foundation Drain Connected to: Sewer	Foundation Drain Connected to: Clearwater Dr.	Foundation Drain Connected to: Sewage Sump	Foundation Drain Connected to: Clearwater Sump	Sewage Sump C.I.	Sewage Sump Other	Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	Manure Hopper or Retention or Pneumatic Tank
											60		Seepage Pit: ; Seepage Bed: ; Seepage Trench: 100	

Privy	Pet Waste Pit	Pit: Nonconforming Existing (Well / Pump / Tank)	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit	Earthen Manure Basin

Temporary Manure Stack or Platform	Watertight Liquid Manure Tank or Basin	Manure Pressure Pipe	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Manure Storage Basin: Concrete Floor Only / Concrete Floor and Partial Concrete Walls	Other (Describe)

5. Well is intended to supply water for: Human

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
5	Surface	97½			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification Mfg. & Method of Assembly	From (ft.)	To (ft.)
5	New Steel Pipe Threaded & Coupled 15.2 lbs per ft Astm A-53 Valley Steel Pipe	Surface	95
3 ft by 5" Johnson Screen		94½	97½

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
None	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand & Gravel	Surface	97½

RECEIVED
JUN 29 1981
DNR - WCD

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on 6-11 1981

Well is terminated 10 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

11. MISCELLANEOUS DATA

Yield Test: 1 Hrs. at 12 GPM

Depth from surface to normal water level 72 Ft.

Depth of water level when pumping 72 Ft. Stabilized ☒ Yes ☐ No

Water sample sent to Madison laboratory on 6-17 1981

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature [illegible]

Business Name and Complete Mailing Address [illegible]

WELL LOG # 8

State of Wisconsin
Department of Natural Resources
Box 7921
Madison, Wisconsin 53707

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300-15 Rev. 12-76

NOV 28 1980

NOV 26 1980

1. COUNTY Chippewa | CHECK (✓) ONE: ☑ Town ☐ Village ☐ City | Name Hallie

4. Distance in feet from well to nearest: (Record answer in appropriate block)	Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	6	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other		None		Seepage Pit	
				Clearwater Dr.	Clearwater Sump						Seepage Bed	
											Seepage Trench	None

Privy	Pet Waste Pit	Pit: Nonconforming Existing		Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass-Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit
		Well		Nonconforming Existing							
		Pump									
		Tank									

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)

5. Well is intended to supply water for: Human

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
5	Surface	96			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
5	New Steel Threaded & Coupled 15 lbs per ft Asta A-53 Valley Steel Pipe	Surface	93
5" by 3 ft Johnson Screen		93	96

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
None	Surface	

9. FORMATIONS

Kind	From (ft.)	To (ft.)
Sand & Gravel	Surface	96

10. TYPE OF DRILLING MACHINE USED

☒ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud
☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary
☐ Jetting with ☐ Air ☐ Water

Well construction completed on 9-16 1980

11. MISCELLANEOUS DATA

Yield Test: 3 Hrs. at 10 GPM

Depth from surface to normal water level 74 Ft.

Depth of water level when pumping 74 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 10 inches ☒ above ☐ below final grade

Well disinfected upon completion ☒ Yes ☐ No

Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to Madison laboratory on 9-16 1980

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: Robert Wettstein Registered Well Driller

Complete Mail Address: R-2 Eau Claire Wis